



# NBCE

NATIONAL BOARD OF  
CHIROPRACTIC EXAMINERS

**2019**



## PRACTICE ANALYSIS OF CHIROPRACTIC NUTRITIONISTS



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## **FOREWORD**

The Chiropractic Board of Clinical Nutrition (CBCN) is responsible to its members for the preparation of psychometrically sound and legally defensible licensure examinations. To assure psychometric qualities of the CBCN exam, the board partnered with the National Board of Chiropractic Examiners (NBCE) to develop, administer, score, and report scores for the CBCN exam.

The periodic performance of practice analysis (occupational analysis/job analysis) studies assists the NBCE in evaluating the validity of the test plan that guides content distribution of the licensure examination. Because the U.S. health care industry is rapidly changing, practice analysis studies are traditionally conducted on a five-year cycle. A panel of subject matter experts was assembled; a list of chiropractic nutritionist activities was created and incorporated into a survey that was sent to a sample of certified chiropractic nutritionists. The data were collected and analyzed. This report presents the methodology and results of the analyses conducted.



## INTRODUCTION

***The Chiropractic Board of Clinical Nutrition*** (CBCN) was founded in 2009 as a credentialing and certifying agency of the chiropractic profession. The CBCN was formed as a professional specialty board for doctors of chiropractic. The goal of the specialty group is to advance clinical nutrition while at the same time enhancing the health of chiropractic patients.

Board-certified chiropractic nutritionists have advanced training in: biochemistry, blood and laboratory analysis, nutritional supplementation, thyroid conditions, gastrointestinal disorders, female hormones, auto immune diseases, heart diseases, blood sugar problems, weight control, pain and inflammation, peripheral neuropathy illness prevention, pediatrics, geriatrics, evidence-based treatments, anti-aging, and sport nutrition.

A diplomate of the Chiropractic Board of Clinical Nutrition (DCBCN) is a licensed chiropractic physician who has successfully completed a post-doctoral program in nutrition of at least three hundred (300) credit hours from a chiropractic college or university, institution, foundation or agency whose program is approved by an accrediting agency recognized by the U.S. Department of Education. The topics of study required are delineated in the bylaws of the CBCN. In addition, the diplomat has successfully passed the certifying examination administered by the CBCN.

The CBCN was created and operates under the auspices of the American Chiropractic Association (ACA) with full autonomy in the areas of testing standards and procedures. The CBCN collaborated with the National Board of Chiropractic Examiners (NBCE) to develop, administer, score, and report the results of the CBCN examination.

***The NBCE*** is the independent third-party testing agency for the chiropractic profession. The NBCE develops, administers, and scores standardized examinations that assess the knowledge, clinical skills, and clinical decision-making capabilities necessary for the safe and effective practice of chiropractic health care.

The NBCE was incorporated in 1963; it administered its first exams in 1965. Prior to the formation of the NBCE, each state chiropractic licensing board created and administered its own battery of licensure examinations. Hence, licensure testing for the chiropractic profession was not uniform, and the standards for entry-level chiropractic licensure varied from state-to-state. Today, all 50 states and the District of Columbia require successful completion of the NBCE examinations for licensure, providing the chiropractic profession a single pathway to licensure.

***The mission of the NBCE*** is Ensuring Professional Competence through Excellence in Testing. In support of that mission, we design and administer assessments that are useful for the chiropractic profession, its regulators, and the public at large.

The following general rules apply to all tests developed by NBCE:

1. We undergo a deliberative process in the design or choice of assessments, keeping in mind the psychometric soundness of the results for particular uses, and the stakes likely to be tied to the assessment results.



2. The needs of score users are different in various decision-making contexts. We are cautious when substituting assessments across user contexts, as there is the potential of misusing instruments and the information they yield.
3. Prior to using assessments, we evaluate who might be affected by the results, and the extent to which the decisions made with the results are likely to have serious consequences for the assessors, various users and stakeholders, and those assessed. We implement assessments only after weighing all possible social, legal, and practical consequences of their use, both deliberate and inadvertent.

The following figure demonstrates the assessment cycle at NBCE.



The NBCE is responsible to its clients for the preparation of psychometrically sound and legally defensible licensure examinations. The periodic performance of practice analysis (i.e., job analysis) studies assists the NBCE in evaluating the validity of the test plan that guides content distribution of the licensure examination. Furthermore, practice analysis studies have long been recognized by measurement and testing professions as important sources of validity evidence for licensure examinations (AERA, APA, and NCME, 2014). Because the U.S. health care industry is rapidly changing, practice analysis studies are traditionally conducted by the NBCE on a five-year cycle.

## **DEFINITION OF PRACTICE ANALYSIS**

A variety of terms have been used to refer to the collection of this type of job-related data, including job analysis, role analysis, role delineation study, process analysis, and practice analysis. For the purpose of this study, we define practice analysis as a systematic collection of data describing the knowledge, skills and/or competencies required to practice a profession (Knapp & Knapp, 1995). The process of practice analysis involves in-depth investigation in order to control the output, i.e., get the job performed successfully.

A general model for test development assumes that the test author will assure the validity of the test for the intended populations of test takers. The validation process begins with the formulation of detailed trait or construct definitions, derived from psychological theory, prior research, or systematic observation and analyses of the relevant behavior domain. Test items are then prepared to fit the construct definitions (Anastasi, 1988). The practice analysis helps to establish test validity by:

- Establishing a profile of the profession
- Tracking trends in professional practice
- Informing the development and refinement of professional programs
- Capturing current practice while anticipating future change



## LEGAL AND PROFESSIONAL STANDARDS PERTAINING TO PRACTICE ANALYSIS

***Uniform Guidelines on Employee Selection Procedures (1978).*** Although the *Guidelines* pertain to the use of job analyses in employment selection, these laws and the subsequent court cases based on them also are relevant to licensing because they characterize which types of procedures are viewed by the court as being appropriate for defining professional responsibilities and knowledge. The *Guidelines* clearly establish the importance of using job analyses to demonstrate the validity of selection procedures, but describe only in very general terms what constitutes acceptable job analysis methodologies. Any method of job analysis may be used if it provides information appropriate for the type of validity to be demonstrated (i.e., content-, construct-, or criterion-related validity). Procedures to be used for establishing each type of validity are outlined, again only in very general terms. With respect to establishing content validity—which is the goal of most practice analyses conducted within the context of licensure—the *Guidelines* require that the job analysis focus on observable work behaviors and tasks and work products, as opposed to personality and other individual characteristics that are not directly observable.

- "Congress [has] placed on the employer (in the Civil Rights Act of 1964) the burden of showing that any given [selection] requirement must have a manifest relationship to the employment [job] in question."
- "Good intent or absence of discriminatory intent does not redeem employment procedures or testing mechanisms that operate as built-in headwinds...Congress directed the thrust of the Act (Title VII) to the consequences of employment practices, not simply the motivation." *Griggs v. Duke Power Co.*, 401 U.S. 424, 432, 91 S. Ct. 849, 28 L.Ed.2d 158 (1971).
- Congress has commanded "...that any tests used must measure the person for the job and not the person in the abstract." (*Griggs v. Duke Power*)
- Identification of the relative importance of the skills and tasks involved in a job and the competency required for the various aspects of a position are essential functions of a job analysis. (*Kirkland v. New York State Department of Correctional Services*)
- "The cornerstone in the construction of a content valid examination is the job analysis." (*Kirkland v. New York State Department of Correctional Services*)
- "Job relatedness cannot be proven through vague and unsubstantiated hearsay." (*Albermarle Paper Company v. Moody*)
- Limiting job analysis to selected jobs, that are unrepresentative of the full range of work performed, is inadequate for test development. (*Albermarle Paper Company v. Moody*)

***Professional standards*** that pertain to practice analyses include *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association & National Council on Measurement in Education, 2014) and the *Principles for the Validation and Use of Personnel Selection Procedures* (Society for Industrial and Organizational Psychology, 2003). Although the *Standards* and *Principles* are not legal documents, they frequently have been used by the courts to determine the appropriateness of validation procedures (Harvey, 1991). Perhaps it is for this reason that many licensing agencies have elected to develop



procedures that are in accordance with these professional standards, despite the fact that there have as yet been no Supreme Court cases regarding the validation of occupational tests.

***The Standards*** emphasize that job analysis is the primary basis for determining the content, and assessing the validity, of licensure examinations. Moreover, only responsibilities and knowledge crucial to protecting the public are to be included in licensing examinations. This, in turn, implies that practice analyses conducted in conjunction with licensing efforts also must focus on these minimal but crucial competencies. Responsibilities and knowledge important to successful job performance, but unrelated to protecting the public, are not appropriate to the domain of licensing.

***Principles for the Validation and Use of Personnel Selection Procedures.*** The *Principles* also point out the importance of job analysis in establishing content validity, but like the *Standards*, do not specify when particular procedures should be used. However, some general recommendations are provided that would pertain to licensure-related practice analyses:

- sources of job-related information should be credible
- rating scales should have reasonable psychometric characteristics
- lack of consensus among subject matter experts regarding tasks, knowledge, skills, and abilities should be noted and carefully considered

Smith and Hambleton (1990) have noted that the criterion by which the courts have assessed validation procedures for licensing examinations is not as rigorous as that of the *Standards*, creating a climate in which a licensing board can develop a licensing exam that is legally defensible, but does not meet testing community standards. They conclude that it is professionally inappropriate to maintain that legal defensibility can serve as the sole basis for developing and validating licensure examinations, but remark that:

...except for the legal and political pressures created by social systems, sponsors of licensure examination programs are under no obligation to conduct validation studies or to make public the results of their investigation. In today's litigious society, sponsors of licensure examination programs seem to feel that they must estimate the dangers associated with conducting, or not conducting, various kinds of validity investigations. (Smith & Hambleton, 1990, p. 8).



## METHODOLOGY

Several methodological approaches are available for conducting practice analysis including:

- Observational studies
- Qualitative interviews
- Reviews of clinical incidents
- Surveying
- Review of job diaries
- Review of checklists
- Technical conferences

Surveying was used as the data collection methodology for this practice analysis.

**Participants.** The NBCE contacted a list of chiropractic nutritionists provided by the CBCN with a request to complete the survey. The original list contained 168 contacts; 78 survey responses were returned to the NBCE, which makes the survey response rate 46%.

The majority of the respondents (69%) were male versus 31% female. The vast majority of respondents were Caucasian (92%) with some African-American (1%), and Hispanic/Latino (3%); 4% reported other ethnic origin. Half of the survey respondents (52%) reported to have a Bachelor's degree prior to chiropractic training.

A number of steps were necessary to perform practice analysis for CBCN. Descriptions of subject matter expert (SME) panel processes, survey development, sample selection and data collection procedures are provided in this section, as well as information about assurance of confidentiality, response rates and the degree to which participants were representative of the population.

**The 2019 survey** relied on previously collected information. In order to collect information about trends in chiropractic nutrition and health care and to anticipate possible changes in the future of practice, a diverse group of chiropractic nutritionists, developed and approved the content of the initial survey, which was administered in 2010.

**A panel of SMEs**, in order to assist with the practice analysis study, was created internally at the NBCE. The panel included three doctors of chiropractic who also have extensive experience in test construction, a psychometrician, and a psychometric intern. One of the panel members is also a Diplomate of CBCN.

The CBCN board members and the NBCE panel of SMEs had thoroughly reviewed the survey administrated in 2010 weighing the relevance of questions and providing necessary modifications. Additionally, the Role Description for a Diplomate of the CBCN was reviewed and confirmed as up to date and accurate by the CBCN Board.

The primary purpose of this survey is to inform and provide validity evidence for the content of the CBCN Diplomate of Nutrition examination. Specifically, those responsible for test



development should have empirical evidence to inform the selection of test content. The 2019 survey of Clinical Nutritionists instructed respondents to indicate the frequency with which they perform professional functions and specific nutritional interventions; respondents were also asked to provide an opinion of the risk to a patient's health or safety if the function or care were omitted or poorly performed.

**Scales.** The *Frequency of Professional Functions* section of the survey asked clinical nutritionists to indicate how frequently during the past 12 months they had performed each of the professional functions and how frequently they had utilized various specific nutritional interventions for patient care. The frequencies were reported on a 5-point scale ranging from *never* to *routinely*. The risk factor portion presented a context in which the respondent was asked to consider a patient who needed a clinical nutritionist to perform each function. The respondent was asked to assess the risk to a patient's health or safety if a clinical nutritionist omitted or poorly performed the function. The respondent was instructed to assess risk independent of how frequently they may perform the function. Risk was assessed on a 5-point scale of *no risk* to *severe risk*.

**The professional functions** were presented in a logical order in the survey beginning with the clinical nutritionist initially obtaining a case history, followed by performing examinations, then performing or ordering additional nutrition-specific studies and tests and interpreting the results. Next, respondents considered the following professional functions: developing differential diagnoses, determining a probable prognosis, formulating a treatment plan with regard to types of nutritional interventions available with special consideration to interactions between herbs, medications, and other nutrients. They also reported on case management functions such as providing nutritional counseling on lifestyle habits, diets, exercise, and overall well-being. Nutrition-specific considerations related to documentation and objective outcome measures were evaluated.

**The creation of importance index** was done by multiplying the frequency of responses in professional functions by risk. The professional functions responses were dichotomized in the following way:

$$Response_{ij} = \begin{cases} 1 & \text{if routinely or frequently} \\ 0 & \text{if otherwise} \end{cases}$$

where  $Response_{ij}$  is the survey response  $i$ ,  $i = 1, 2, \dots, 78$  on a professional function item  $j$ ,  $j = 1, 2, \dots, 88$ . The risk responses were dichotomized in the following way:

$$Response_{ik} = \begin{cases} 1 & \text{if severe risk or significant risk} \\ 0 & \text{if otherwise} \end{cases}$$

where  $Response_{ik}$  is the survey response  $i$ ,  $i = 1, 2, \dots, 78$  on a risk item  $k$ ,  $k = 1, 2, \dots, 88$ . Then the importance index was calculated for each combination of professional function and risk in the following way:

$$n(Response_{ij} = 1) \times n(Response_{ik} = 1)$$

where  $n(\text{Response}_{ij} = 1)$  is the count of “routinely” or “frequently” responses on professional function items, and  $n(\text{Response}_{ik} = 1)$  is the count of “severe risk” or “significant risk” responses on risk items.

**The calculation of the category weights** on the CBCN exam was performed in two steps. The first step was to compute the overall risk for the six categories represented in the exam: 1 = Case History, 2 = Physical and Nutrition Examination, 3 = Laboratory and Nutrition-Specific Testing, 4 = Imaging and Other Specific Studies, 5 = Diagnosis or Clinical Impression, 6 = Treatment and Specific Nutritional Interventions, and 7 = Case Management. The following is a formulaic representation of the calculation:

$$\text{Importance}_{tc} = \sum_{i=1}^{I_c} \text{Importance}_{ic} = \sum_{i=1}^{I_c} n(\text{Response}_{ij} = 1) \times n(\text{Response}_{ik} = 1)$$

where  $\text{Importance}_{tc}$  is the total importance for exam category  $c$ ,  $c = 1, 2, \dots, 7$ , and  $\text{Importance}_{ic}$  is the importance index for item  $i = 1, 2, \dots, I_c$  in the category  $c$ .

The overall importance for the exam was calculated in the following way:

$$\text{Importance}_{TE} = \sum_{c=1}^7 \text{Importance}_{tc}$$

where  $\text{Importance}_{TE}$  is the importance index for the entire exam. Finally, the category percentage (weight) was calculated in the following way:

$$\text{Weight}_c = \frac{\text{Importance}_{tc}}{\text{Importance}_{TE}}$$

where  $\text{weight}_c$  is the percentage of category  $c$  on the exam.

## RESULTS

The NBCE routinely uses descriptive statistical techniques to analyze and report the results of the practice analysis. Descriptive statistical methodology includes methods of construction of graphs, charts, and tables, and the calculation of various descriptive measures such as averages, measures of dispersion, and percentiles. We use these techniques to describe the basic features of the survey data. This section will introduce key results of the 2019 survey.

**Table 1: Overall Domain Means for Activity Frequency and Risk**

Category Domain Name	Frequency of Activities Mean (SD)	Risk of Activities Mean (SD)
Case History	4.4 (.4)	3.3 (.4)
Physical and Nutritional Examination - including anthropometrics and neuromusculoskeletal	3.6 (.5)	3 (.3)
Laboratory and Nutritional-Specific Testing	3.1 (1.3)	3 (.8)
Imaging and Other Special Studies	2.6 (.9)	2.8 (.6)
Diagnosis or Clinical Impression	4.6 (.1)	3.8 (0)
Treatment and Specific Nutritional Interventions	3.2 (.7)	3.2 (.4)
Case Management	4.2 (.5)	3.3 (.3)

Table 1 gives the reported means and standard deviations of the frequency of activities and risk for practicing chiropractors on the seven domains of the practice analysis survey. The three domains that participants reported the highest occurrence of activities on average are case history (4.4), diagnosis or clinical impression (4.6), and case management (4.2). Chiropractic nutritionists frequently to routinely perform these activities. Physical and nutritional examination has an average of 3.6, signifying that chiropractic nutritionists perform these tasks sometimes to frequently. Imaging and other special studies has the lowest reported amount of activity with an average of 2.6 suggesting that they sometimes to rarely perform these tasks. Survey respondents reported that on average there is some risk involved to the patient's health or safety when they poorly perform an assessment task in all of the domains. Diagnosis or clinical impression had the highest average of 3.8 indicating that severe risk may occur if there is a poor performance.

The NBCE developed and implemented a methodology to connect survey results with the CBCN test plan given the small sample of respondents. Based on the quantitative analysis of the survey responses, the following was a suggested distribution of weights across the domains of the exam:



**Table 2: Exam Weight Distribution Based on Quantitative Analysis**

Weight	CatSub	Category Name
26%	01	Case History
6%	02	Physical and Nutritional Examination - including anthropometrics and neuromusculoskeletal
14%	03	Laboratory and Nutrition-Specific Testing
1%	04	Imaging and Other Special Studies
5%	05	Diagnosis or Clinical Impression
11%	06	Treatment and Specific Nutritional Interventions
37%	07	Case Management

On July 2, 2019, a qualitative panel took place to review the survey results. The panel reviewed the quantitative methodology, and suggested revisions to the test plan. The following participants were included in the panel:

Dr. Bruce Shotts (active participant, content expert)  
Dr. Greg Crawford (active participant, content expert)  
Dr. Andrew Gow (active participant, content expert)  
Dr. Igor Himelfarb (non-active participant, psychometrician)  
Justin Harding (non-active participant, psychometric intern)

The panel suggested reducing the number of domains on the Nutrition exam from 7 to 6 by combining *Laboratory and Nutrition-Specific Testing* and *Imaging and Other Special Studies* domains. Additionally, the panel decided on the final distribution of weights combining the quantitative results with qualitative perspectives. The following is the final distribution of weights across domains on the Nutrition exam:

**Table 3: Exam Weight Distribution Based on Quantitative and Qualitative Analyses**

Weight	CatSub	Category Name
20%	01	Case History
10%	02	Physical and Nutritional Examination - including anthropometrics and neuromusculoskeletal
15%	03	Laboratory and Nutrition-Specific Testing; Imaging and Other Special Studies
20%	04	Diagnosis or Clinical Impression
15%	05	Treatment and Specific Nutritional Interventions
20%	06	Case Management

The complete results of the survey are presented in the Appendices A, B, and C. Appendix A presents the demographic characteristics of the sample, and result to the professional function



items. Appendix B presents summary of responses to the risk items. Finally, Appendix C presents figures associated with item responses.

## **CONCLUSION**

The CBCN occupational (practice) analysis is a first step in the definition of the skills required for practicing chiropractic nutritionists. The report based on the occupational analysis becomes one of the reference and a decision-making tool used by the Board for developing and administrating quality assessments.

The test plan of the CBCN exam is based on an in-depth survey of the chiropractic profession and chiropractic nutrition specialty. The quantitative and qualitative analyses of the survey responses indicated that minor changes to the test plan were needed.







## NBCE KEY PERSONNEL

**Project Lead: Dr. Bruce Shotts** has worked with the National Board of Chiropractic Examiners (NBCE) in several capacities during the past three decades and is currently the NBCE Director of Written Examinations. In addition to his chiropractic and acupuncture degrees, he has a Masters' degree in Human Nutrition and is a Diplomate of the Chiropractic Board of Clinical Nutrition (DCBCN). Having maintained an active practice for 24 years, Dr. Shotts is fully aware of the natural healing power that proper dietary habits and nutritional interventions can provide to a patient. The purpose of his involvement in this study is to identify and publicize best practices that are currently being utilized in the field of nutritional health care and promulgate this through the effective testing of doctors who wish to utilize the power of nutrition and provide a higher quality of life to their patients.

**Project Consultant: Dr. Greg L. Crawford** graduated from North Dakota State University with a bachelor's degree in biology and a minor in chemistry. Dr. Crawford received his doctorate in chiropractic from Northwestern Health Science University. He is a diplomate in chiropractic orthopedics, which was awarded by Southern California University of Health Sciences. Dr. Crawford was in private practice in Fort Collins, Co for 31 years before becoming an exam development specialist at the National Board of Chiropractic Examiners.

**Project Consultant: Dr. Andrew R. Gow** is a 1999 graduate of Logan University and practiced in Loveland, Colorado, before coming to the NBCE. He received Diplomate certification in acupuncture from the National Certification Commission for Acupuncture and Oriental Medicine in 2003. In 2006, he began teaching acupuncture at Aims Community College. Through this training, doctors meet State of Colorado requirements to practice acupuncture in a chiropractic setting. Dr. Gow first came to the NBCE in 2008 to as a subject matter expert in acupuncture. Dr. Gow is currently directing the Department of Practical Testing and Research.

**Project Psychometrician: Dr. Igor Himelfarb** is the psychometrician at NBCE. He received his Ph.D. in Educational Measurement with specialization in Research Methodology and Educational Statistics from the University of California, Santa Barbara. Prior to joining NBCE, Igor served as Psychometrician at Educational Testing Service's (ETS) San Francisco office. Before joining ETS, Dr. Himelfarb held a position in Advanced Design and Analytics at The Gallup Organization in Irvine, California. Dr. Himelfarb is a scholar actively contributing to the fields of educational measurement, assessment, and evaluation.

**Psychometric Intern: Justin Harding** is a psychometric intern at the NBCE. He is a sixth year Ph.D. student in the Department of Applied Statistics and Research Methodology at the University of Northern Colorado.



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## APPENDIX A: DEMOGRAPHICS AND FREQUENCIES

Item	Demographic Labels	Mean (SD)	Percent	N
What is your gender?				78
	Male	N/A	69%	
	Female	N/A	31%	
What is your ethnicity?				74
	Asian/Pacific Islander	N/A	0%	
	African-American/Black	N/A	1%	
	White	N/A	92%	
	Hispanic/Latino	N/A	3%	
	Native American	N/A	0%	
	Other	N/A	4%	
How many years have you been in practice?				76
	Fewer than 2 Years	N/A	0%	
	2-4 Years	N/A	0%	
	5-15 Years	N/A	12%	
	16-25 Years	N/A	21%	
	More than 25 Years	N/A	67%	
What is the highest level of non-chiro education you have obtained?				77
	High School Diploma	N/A	0%	
	Associate Degree	N/A	8%	
	Bachelor's Degree	N/A	52%	
	Master's Degree	N/A	20%	
	Doctoral Degree	N/A	17%	
	Other	N/A	4%	
How many hours of education do you earn each year that are not related to your practice?				75
	None	N/A	19%	



Item	Demographic Labels	Mean (SD)	Percent	N
	1-7 Hours	N/A	27%	
	8-14 Hours	N/A	13%	
	15-24 Hours	N/A	16%	
	25-35 Hours	N/A	11%	
	More than 35 Hours	N/A	15%	
What are your gross practice earnings?				77
	Less than \$200,000	N/A	36%	
	\$200,000-\$300,000	N/A	23%	
	\$300,000-\$400,000	N/A	9%	
	\$400,000-\$500,000	N/A	12%	
	More than \$500,000	N/A	20%	
What is your post-graduate nutrition diplomate status through an ACA or ICA boards?				77
	Nutrition Diplomate Status in Progress	N/A	4%	
	Nutrition Diplomate Status Complete	N/A	96%	
Do you currently include nutritional evaluation counseling?				77
	Yes	N/A	97%	
	No	N/A	3%	
How many hours per week you practice chiropractic and/or nutritional evaluation, counseling, supplementation, testing, etc.?				75
	9 or Fewer	N/A	11%	
	10 to 19	N/A	21%	
	20 to 29	N/A	27%	
	30 to 39	N/A	27%	
	40 to 49	N/A	12%	
	50 to 59	N/A	3%	



Item	Demographic Labels	Mean (SD)	Percent	N
How many hours in your week are dedicated to nutritional evaluation, counseling, supplementation, testing, etc., in your practice (this refers to patient management and not teaching, research, etc.)?	60 or More	N/A	0%	73
	9 or Fewer	N/A	33%	
	10 to 19	N/A	44%	
	20 to 29	N/A	15%	
	More than 40	N/A	8%	
How many years have you been in practice?				74
	Fewer than 2 Years	N/A	0%	
	2-4 Years	N/A	0%	
	5 to 15 Years	N/A	11%	
	16-25 Years	N/A	19%	
	More than 25 Years	N/A	70%	
How many years have you included nutritional evaluation, counseling, supplementation, testing, etc., in your practice (this refers to patient management and not teaching, research, etc.)?				75
	Fewer than 2 Years	N/A	0%	
	2-4 Years	N/A	1%	
	5 to 15 Years	N/A	16%	
	16-25 Years	N/A	31%	
	More than 25 Years	N/A	52%	
What is the total number of patients (not patient visits) you personally treat per week with chiropractic care and/or with nutritional evaluation, counseling, supplementation, testing, etc.?				72
	Fewer than 50	N/A	56%	
	50 - 99	N/A	28%	
	100 - 149	N/A	13%	





Item	Demographic Labels	Mean (SD)	Percent	N
What is the total number of patients (not patient visits) you personally treat using only nutritional evaluation, counseling, supplementation, testing, etc., each week?	150 - 199	N/A	3%	72
	200 - 249	N/A	1%	
	250 - 300	N/A	0%	
	More than 300	N/A	0%	
	0	N/A	3%	
	1 to 49	N/A	86%	
	50 to 99	N/A	7%	
	100 to 149	N/A	3%	
	150 to 199	N/A	0%	
How many hours of continuing education have you earned during the past year?	200 to 249	N/A	1%	78
	250 to 300	N/A	0%	
	More than 300	N/A	0%	
	None	N/A	94%	
	1 to 10	N/A	0%	
	11 to 15	N/A	0%	
	16 to 20	N/A	1%	
	21 to 25	N/A	1%	
	26 to 30	N/A	1%	
What is the size of the community in which your practice is located?	More than 300	N/A	3%	74
	City	N/A	37%	
	Suburb of City	N/A	32%	
	Large Town	N/A	12%	



Item	Demographic Labels	Mean (SD)	Percent	N
Do you have staff privileges at a hospital?	Small Town	N/A	16%	73
	Rural	N/A	3%	
	Yes	N/A	0%	
	No	N/A	100%	
How much of your time is spent on nutrition?	None	N/A	0%	74
	1 to 25%	N/A	38%	
	26 to 50%	N/A	23%	
	51 to 75%	N/A	22%	
	76 to 100%	N/A	18%	
How much of your time is spent documenting care?	None	N/A	0%	73
	1 to 25%	N/A	63%	
	26 to 50%	N/A	29%	
	51 to 75%	N/A	3%	
	76 to 100%	N/A	6%	
How much of your time is spent in Business Management? (personnel, marking, etc.)	None	N/A	8%	74
	1 to 25%	N/A	74%	
	26 to 50%	N/A	16%	
	51 to 75%	N/A	1%	
	76 to 100%	N/A	0%	
What percentage of your patients are Male?				75
	None	N/A	0%	
	1 to 25%	N/A	0%	
	26 to 50%	N/A	31%	



Item	Demographic Labels	Mean (SD)	Percent	N
What percentage of your patients are Female?	51 to 75%	N/A	67%	74
	76 to 100%	N/A	3%	
	None	N/A	0%	
	1 to 25%	N/A	0%	
	26 to 50%	N/A	30%	
	51 to 75%	N/A	51%	
What Percentage of your patients are age 5 or younger?	76 to 100%	N/A	19%	74
	None	N/A	19%	
	1 to 25%	N/A	81%	
	26 to 50%	N/A	0%	
	51 to 75%	N/A	0%	
	76 to 100%	N/A	0%	
What percentage of your patients are age 5-17?				75
	None	N/A	4%	
	1 to 25%	N/A	93%	
	26 to 50%	N/A	3%	
	51 to 75%	N/A	0%	
	76 to 100%	N/A	0%	
What percentage of your patients are age 18-30?				75
	None	N/A	3%	
	1 to 25%	N/A	55%	
	26 to 50%	N/A	41%	
	51 to 75%	N/A	1%	
	76 to 100%	N/A	0%	
What percentage of your patients are age 31-50?				74
	None	N/A	0%	



Item	Demographic Labels	Mean (SD)	Percent	N
	1 to 25%	N/A	23%	
	26 to 50%	N/A	58%	
	51 to 75%	N/A	19%	
	76 to 100%	N/A	0%	
What percentage of your patients are age 51-64?				75
	None	N/A	0%	
	1 to 25%	N/A	22%	
	26 to 50%	N/A	51%	
	51 to 75%	N/A	25%	
	76 to 100%	N/A	1%	
What percentage of your patients are age 65 and older?				75
	None	N/A	1%	
	1 to 25%	N/A	72%	
	26 to 50%	N/A	21%	
	51 to 75%	N/A	3%	
	76 to 100%	N/A	3%	
How often do you obtain a personal health history?		4.9 (.4)	N/A	75
How often do you utilize a health questionnaire?		4.5 (1)	N/A	75
How often do you obtain a list of prescription and non prescription drugs and supplements?		4.9 (.4)	N/A	74
How often do you inquire about use of recreational/illicit drugs?		4.4 (.9)	N/A	75
How often do you inquire about the use of alcohol?		4.7 (.7)	N/A	74
How often do you inquire about the use of caffeine?		4.7 (.7)	N/A	75
How often do you inquire about exercise habits?		4.8 (.4)	N/A	74
How often do you obtain a psychosocial history?		4.3 (1)	N/A	75
How often do you obtain a family health history?		4.8 (.6)	N/A	73
How often do you inquire about religious or ethical dietary restrictions?		3.6 (1.3)	N/A	75



Item	Demographic Labels	Mean (SD)	Percent	N
How often do you inquire about any other specific diets used within the last 12 months?		4.6 (.6)	N/A	74
How often do you review the respiratory system?		4.1 (1)	N/A	75
How often do you review endocrine and metabolic systems?		4.6 (.6)	N/A	74
How often do you review alimentary and gastrointestinal systems?		4.7 (.5)	N/A	75
How often do you review genitourinary and reproductive systems?		4.5 (.8)	N/A	75
How often do you review the hematological/hematopoietic system?		4.5 (.8)	N/A	75
How often do you review the musculoskeletal system?		4.8 (.5)	N/A	73
How often do you review the nervous system?		4.8 (.4)	N/A	74
How often do you review psychological /psychiatric/mental health status?		4.3 (.9)	N/A	75
How often do you review skin conditions and allergies?		4.6 (.7)	N/A	75
How often do you review other problems or information not listed above?		4 (1)	N/A	75
How often do you obtain a 24 hour diet recall?		3.7 (1.2)	N/A	72
How often do you obtain a three-day diet diary?		3.4 (1.2)	N/A	75
How often do you obtain a 7-day diet diary?		3.5 (1.2)	N/A	75
How often do you review a diet diary with patient?		4 (1)	N/A	75
How often do you obtain vital signs?		4.6 (.8)	N/A	75
How often do you inspect hair, nails, skin, tongue, etc.?		4.2 (.9)	N/A	74
How often do you perform an ENT examination?		3.1 (1.1)	N/A	73
How often do you perform a cardiopulmonary examination?		3.4 (1.2)	N/A	75
How often do you perform an abdominal examination?		3.6 (1)	N/A	74
How often do you perform a nutrition-focused orthopedic/neurologic examination?		3.6 (1.1)	N/A	75
How often do you obtain basic anthropometric measurements (height, weight, BMI)?		4.6 (.8)	N/A	73



Item	Demographic Labels	Mean (SD)	Percent	N
How often do you obtain advanced anthropometric measurements (body composition, waist to hip circumference ratio, etc.)?		3.4 (1.2)	N/A	74
How often do you obtain a basal temperature chart?		2.9 (1.2)	N/A	74
How often do you perform nutrition specific examination procedures (Ragland's test, Rogoff, Lowenberg's, etc.)?		3.3 (1.1)	N/A	74
How often do you obtain and interpret diagnostic imaging studies (e.g., bone density, x-ray, CT, etc.) to evaluate for nutritional implications?		3.4 (1)	N/A	74
How often do you obtain and interpret blood laboratory test results for nutritional implications?		4.4 (.8)	N/A	74
How often do you obtain and interpret urine laboratory test results for nutritional implications?		3.9 (1.1)	N/A	74
How often do you obtain and interpret hair, saliva, feces, or other laboratory test results for nutritional implications?		3.6 (1)	N/A	75
How often do you obtain and interpret other specialized studies (e.g., EKG, ultrasound, etc.) for nutritional implications?		2.8 (1.1)	N/A	75
How often do you obtain and interpret electrodermal analysis?		1.7 (.9)	N/A	74
How often do you obtain and interpret live cell analysis with darkfield microscopy?		1.3 (.6)	N/A	74
How often do you obtain genetic testing?		2.2 (.9)	N/A	75
How often do you develop a differential diagnosis or clinical impression?		4.7 (.5)	N/A	75
How often do you review possible interactions of nutrients, foods, drugs, and herbs associated with a patient's care?		4.5 (.8)	N/A	75
How often do you assess the existence of risk factors and contraindications to nutritional intervention?		4.4 (.8)	N/A	74
How often do you develop a case management plan that includes nutritional and lifestyle changes?		4.6 (.6)	N/A	75
How often do you develop a prognosis?		4.4 (1)	N/A	75





Item	Demographic Labels	Mean (SD)	Percent	N
How often do you create complete, legible documentation of a patient's disease history and examination findings as well as diagnosis prognosis, and treatment plan?		4.4 (1)	N/A	74
How often do you review with a patient his or her relevant history, examination findings, diagnosis, prognosis, and case management plan options?		4.8 (.5)	N/A	73
How often do you refer a patient to a specialist for consultation or co-management?		3.2 (.8)	N/A	75
How often do you legibly document each patient contact?		4.8 (.6)	N/A	75
How often do you monitor a patient's progress or response to treatment utilizing objective outcome measures (e.g., questionnaires, etc.)?		4.2 (.8)	N/A	75
How often do you monitor a patient's progress or response to treatment by documenting physical changes in hair, skin, nails, etc.?		3.7 (1)	N/A	75
How often do you monitor a patient's progress or response to treatment utilizing follow-up testing of body impedance analysis, functional tests, etc.?		3.8 (1)	N/A	74
How often do you monitor a patient's progress or response to treatment utilizing follow-up?		4.7 (.6)	N/A	73
How often do you monitor a patient's progress or response to treatment utilizing follow-up lab tests?		4.2 (.9)	N/A	75
How often do you re-examine a patient with physical examination procedures, either periodically or when the patient s condition materially changes?		4.3 (.8)	N/A	74
How often do you re-examine a patient with nutrition-focused orthopedic/neurologic examination procedures, either periodically or when the patient's condition materially changes?		3.9 (1.1)	N/A	74
How often do you write a narrative report (not daily notes)?		2.6 (1)	N/A	75
How often do you provide stress management guidance?		3.8 (1)	N/A	75



Item	Demographic Labels	Mean (SD)	Percent	N
How often do you provide instruction advice regarding activities daily living?		4.6 (.6)	N/A	75
How often do you provide instruction in label reading and food shopping?		4 (.9)	N/A	74
How often do you provide advice regarding food preparation?		4 (.9)	N/A	75
How often do you provide education or advice regarding health promotion and wellness care?		4.4 (.7)	N/A	75
How often do you advise, or counsel patients regarding disease, prevention and early detection?		4.4 (.7)	N/A	75
How often do you advise patients to change risky or unhealthy behaviors?		4.4 (.8)	N/A	75
How often do you advise patients in proper ergonomics/posture?		4.1 (.9)	N/A	74
How often do you advise patients in proper physical fitness and exercise techniques?		4.2 (.7)	N/A	75
How often do you provide patients with recommendations regarding their personal hygiene?		3.4 (1)	N/A	75
How often do you advise patients regarding smoking cessation?		4 (1)	N/A	75
How often do you advise patients regarding nutritional/dietary habits?		4.8 (.5)	N/A	72
How often do you counsel patients on proper sleep quantity and quality?		4.5 (.6)	N/A	74
How often do you review genitourinary and reproductive histories?		4 (.9)	N/A	73
How often do you use homeopathy?		2.6 (1)	N/A	74
How often do you use glandular therapy?		3.2 (1.2)	N/A	75
How often do you recommend therapeutic levels of vitamins and minerals?		4.5 (.7)	N/A	75
How often do you use hormone therapy (e. g., growth, melatonin, progesterone)?		2.7 (1.1)	N/A	73
How often do you use specific amino acid therapy (e.g., arginine, glutamine, tryptophan)?		3.4 (.8)	N/A	75



Item	Demographic Labels	Mean (SD)	Percent	N
How often do you utilize herbal therapy using American and European herbs (extracts, teas tablets, etc.)?		3.6 (1.1)	N/A	75
How often do you utilize herbal therapies using traditional Chinese herbs?		2.4 (1)	N/A	74
How often do you use phytochemical supplementation (e.g. isoflavones, epicatechins)?		3.4 (1)	N/A	75
How often do you utilize weight loss management programs?		3.3 (1.1)	N/A	75
How often do you utilize anorexia/bulimia management programs?		1.8 (.8)	N/A	74
How often do you recommend/provide nutrition— focused patient education classes?		2.8 (1.2)	N/A	75
How often do you recommend/help develop special diets (e.g., diabetes, kidney disease, allergy elimination, gluten, or lactose intolerance)?		3.9 (.9)	N/A	75
How often do you utilize nutritional detoxification protocols?		3.6 (1)	N/A	74
How often do you recommend supplementation for classic nutritional deficiency diseases (e.g., scurvy, beri beri, iron, pernicious anemia, Rickets)?		2.9 (1.1)	N/A	74



## APPENDIX B: RISK

Item	Mean (SD)	N
What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?		
How often do you obtain a personal health history?	3.9 (.8)	74
How often do you utilize a health questionnaire?	3.5 (1)	72
How often do you obtain a list of prescription and non prescription drugs and supplements?	3.9 (.9)	75
How often do you inquire about use of recreational/illicit drugs?	3.7 (1)	74
How often do you inquire about the use of alcohol?	3.7 (.9)	75
How often do you inquire about the use of caffeine?	2.9 (.8)	73
How often do you inquire about exercise habits?	3.1 (.8)	75
How often do you obtain a psychosocial history?	3.3 (.9)	74
How often do you obtain a family health history?	3.4 (.8)	75
How often do you inquire about religious or ethical dietary restrictions?	2.6 (.9)	75
How often do you inquire about any other specific diets used within the last 12 months?	3 (.8)	72
How often do you review the respiratory system?	3.3 (.7)	75
How often do you review endocrine and metabolic systems?	3.5 (.8)	74
How often do you review alimentary and gastrointestinal systems?	3.6 (.8)	75
How often do you review genitourinary and reproductive systems?	3.4 (.7)	75
How often do you review the hematological/hematopoietic system?	3.5 (.8)	75
How often do you review the musculoskeletal system?	3.5 (.8)	74
How often do you review the nervous system?	3.7 (.8)	73
How often do you review psychological /psychiatric/mental health status?	3.4 (.8)	74
How often do you review skin conditions and allergies?	3.3 (.9)	75
How often do you review other problems or information not listed above?	3 (.9)	75
How often do you obtain a 24 hour diet recall?	2.7 (.9)	73
How often do you obtain a three-day diet diary?	2.7 (.9)	74
How often do you obtain a 7-day diet diary?	2.8 (.9)	73
How often do you review a diet diary with patient?	2.9 (1)	75
How often do you obtain vital signs?	3.7 (.9)	75
How often do you inspect hair, nails, skin, tongue, etc.?	3.1 (.8)	75
How often do you perform an ENT examination?	3.3 (.9)	74
How often do you perform a cardiopulmonary examination?	3.2 (.9)	74
How often do you perform an abdominal examination?	3.2 (.7)	74
How often do you perform a nutrition-focused orthopedic/neurologic examination?	3 (.9)	74

How often do you obtain basic anthropometric measurements (height, weight, BMI)?	3 (.9)	72
How often do you obtain advanced anthropometric measurements (body composition, waist to hip circumference ratio, etc.)?	2.7 (.9)	74
How often do you obtain a basal temperature chart?	2.4 (.7)	73
How often do you perform nutrition specific examination procedures (Ragland's test, Rogoff, Lowenberg's, etc.)?	2.7 (.8)	74
How often do you obtain and interpret diagnostic imaging studies (e.g., bone density, x-ray, CT, etc.) to evaluate for nutritional implications?	3.3 (.8)	73
How often do you obtain and interpret blood laboratory test results for nutritional implications?	3.8 (.9)	73
How often do you obtain and interpret urine laboratory test results for nutritional implications?	3.3 (.8)	74
How often do you obtain and interpret hair, saliva, feces, or other laboratory test results for nutritional implications?	3.3 (.9)	75
How often do you obtain and interpret other specialized studies (e.g., EKG, ultrasound, etc.) for nutritional implications?	3.1 (.9)	75
How often do you obtain and interpret electrodermal analysis?	2.1 (.9)	72
How often do you obtain and interpret live cell analysis with darkfield microscopy?	1.9 (1)	70
How often do you obtain genetic testing?	2.5 (.9)	72
How often do you develop a differential diagnosis or clinical impression?	3.8 (.9)	73
How often do you review possible interactions of nutrients, foods, drugs, and herbs associated with a patient's care?	3.8 (.9)	75
How often do you assess the existence of risk factors and contraindications to nutritional intervention?	3.8 (.9)	74
How often do you develop a case management plan that includes nutritional and lifestyle changes?	3.5 (.9)	74
How often do you develop a prognosis?	3.2 (1)	75
How often do you create complete, legible documentation of a patient's disease history and examination findings as well as diagnosis prognosis, and treatment plan?	3.4 (1)	73
How often do you review with a patient his or her relevant history, examination findings, diagnosis, prognosis, and case management plan options?	3.4 (1.1)	74
How often do you refer a patient to a specialist for consultation or co-management?	3.6 (.9)	75
How often do you legibly document each patient contact?	3.5 (1)	75
How often do you monitor a patient's progress or response to treatment utilizing objective outcome measures (e.g., questionnaires, etc.)?	3.2 (.9)	75

How often do you monitor a patient's progress or response to treatment by documenting physical changes in hair, skin, nails, etc.?	2.9 (.9)	75
How often do you monitor a patient's progress or response to treatment utilizing follow-up testing of body impedance analysis, functional tests, etc.?	3.1 (.8)	74
How often do you monitor a patient's progress or response to treatment utilizing follow-up?	3.3 (.9)	73
How often do you monitor a patient's progress or response to treatment utilizing follow-up lab tests?	3.5 (.9)	74
How often do you re-examine a patient with physical examination procedures, either periodically or when the patient's condition materially changes?	3.3 (.8)	74
How often do you re-examine a patient with nutrition-focused orthopedic/neurologic examination procedures, either periodically or when the patient's condition materially changes?	3.3 (.8)	74
How often do you write a narrative report (not daily notes)?	2.4 (1)	74
How often do you provide stress management guidance?	3.3 (.9)	73
How often do you provide instruction advice regarding activities daily living?	3.3 (1)	74
How often do you provide instruction in label reading and food shopping?	3 (.9)	75
How often do you provide advice regarding food preparation?	2.9 (.8)	74
How often do you provide education or advice regarding health promotion and wellness care?	3.1 (1)	75
How often do you advise, or counsel patients regarding disease, prevention and early detection?	3.4 (.9)	75
How often do you advise patients to change risky or unhealthy behaviors?	3.7 (.9)	75
How often do you advise patients in proper ergonomics/posture?	3 (.9)	75
How often do you advise patients in proper physical fitness and exercise techniques?	3.2 (.9)	75
How often do you provide patients with recommendations regarding their personal hygiene?	2.8 (.9)	75
How often do you advise patients regarding smoking cessation?	3.7 (1.1)	73
How often do you advise patients regarding nutritional/dietary habits?	3.6 (1)	73
How often do you counsel patients on proper sleep quantity and quality?	3.3 (1)	74
How often do you review genitourinary and reproductive histories?	3.1 (.9)	74
How often do you use homeopathy?	2.5 (1.1)	73
How often do you use glandular therapy?	3 (1)	74
How often do you recommend therapeutic levels of vitamins and minerals?	3.3 (1)	74

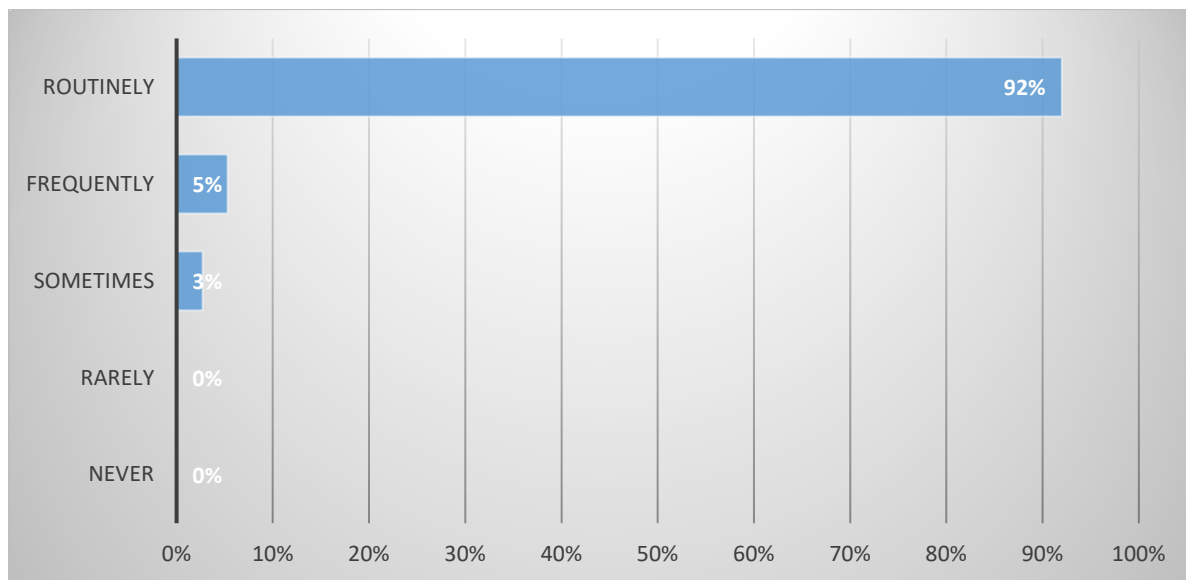




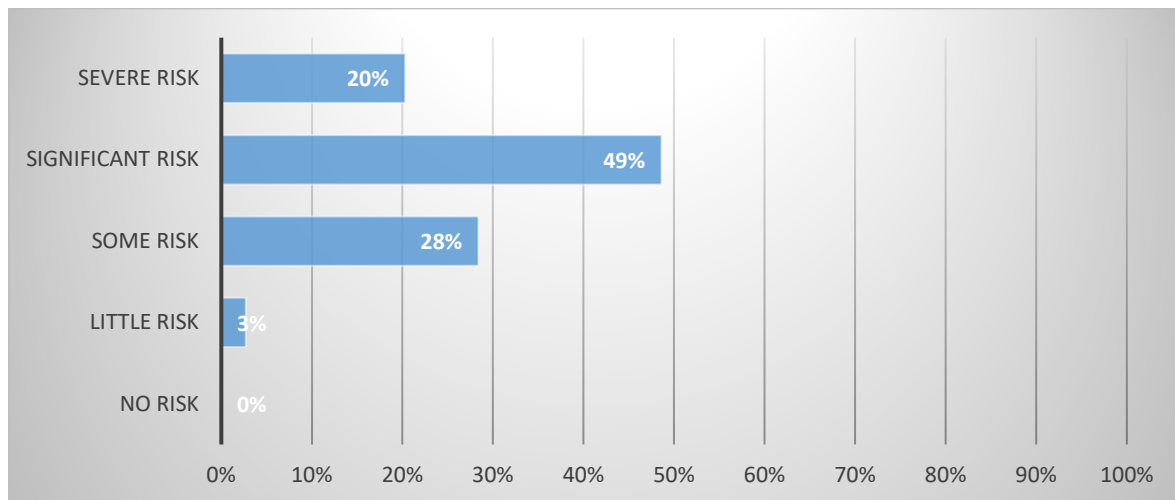
How often do you use hormone therapy (e. g., growth, melatonin, progesterone)?	3.4 (.9)	73
How often do you use specific amino acid therapy (e.g., arginine, glutamine, tryptophan)?	3 (.8)	74
How often do you utilize herbal therapy using American and European herbs (extracts, teas tablets, etc.)?	3.2 (.9)	74
How often do you utilize herbal therapies using traditional Chinese herbs?	2.9 (1)	74
How often do you use phytochemical supplementation (e.g. isoflavones, epicatechins)?	2.7 (.9)	74
How often do you utilize weight loss management programs?	3.2 (.9)	74
How often do you utilize anorexia/bulimia management programs?	3.7 (1.1)	73
How often do you recommend/provide nutrition— focused patient education classes?	2.7 (1.2)	75
How often do you recommend/help develop special diets (e.g., diabetes, kidney disease, allergy elimination, gluten, or lactose intolerance)?	3.5 (1)	74
How often do you utilize nutritional detoxification protocols?	3.3 (.8)	73

## APPENDIX C: FREQUENCY DISTRIBUTIONS OF THE RESPONSES<sup>1</sup>

*Item 34a: How often do you obtain a personal health history?*



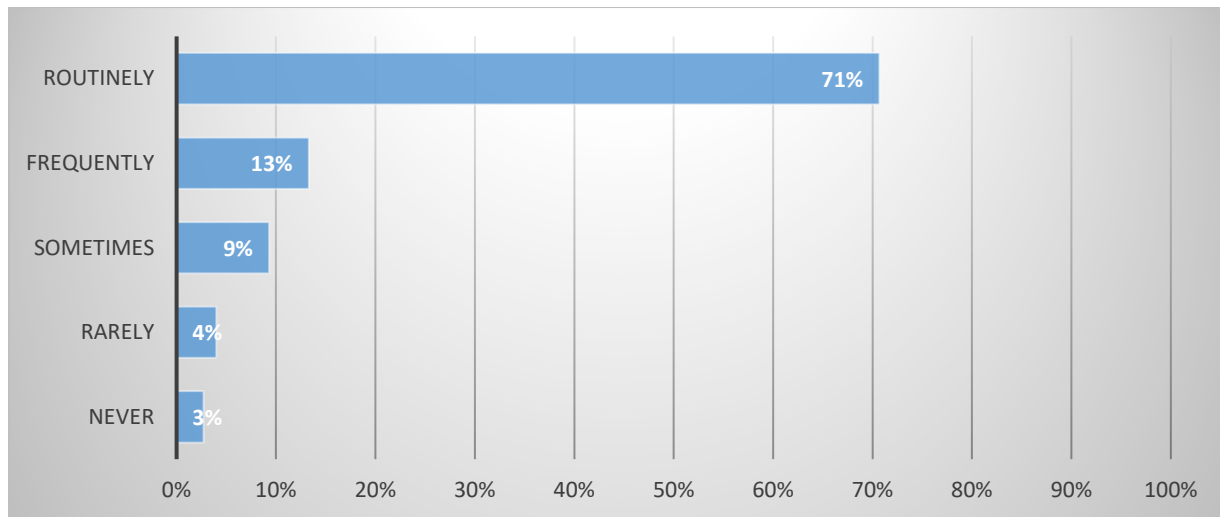
*Item 34b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?*



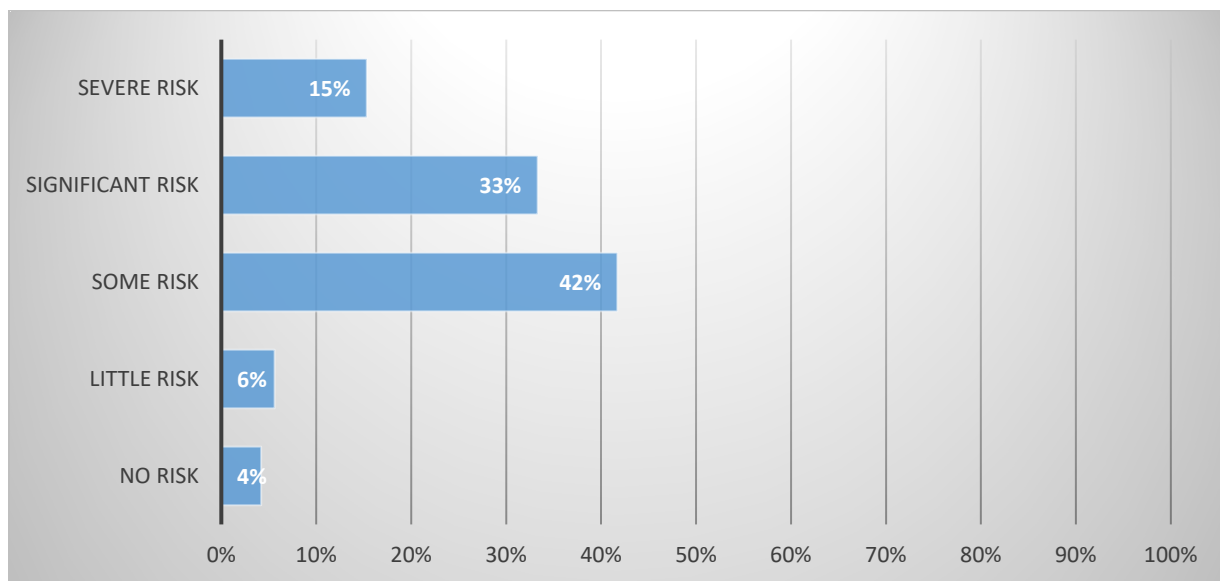
<sup>1</sup> Items with 100% responses at a single category are not presented.



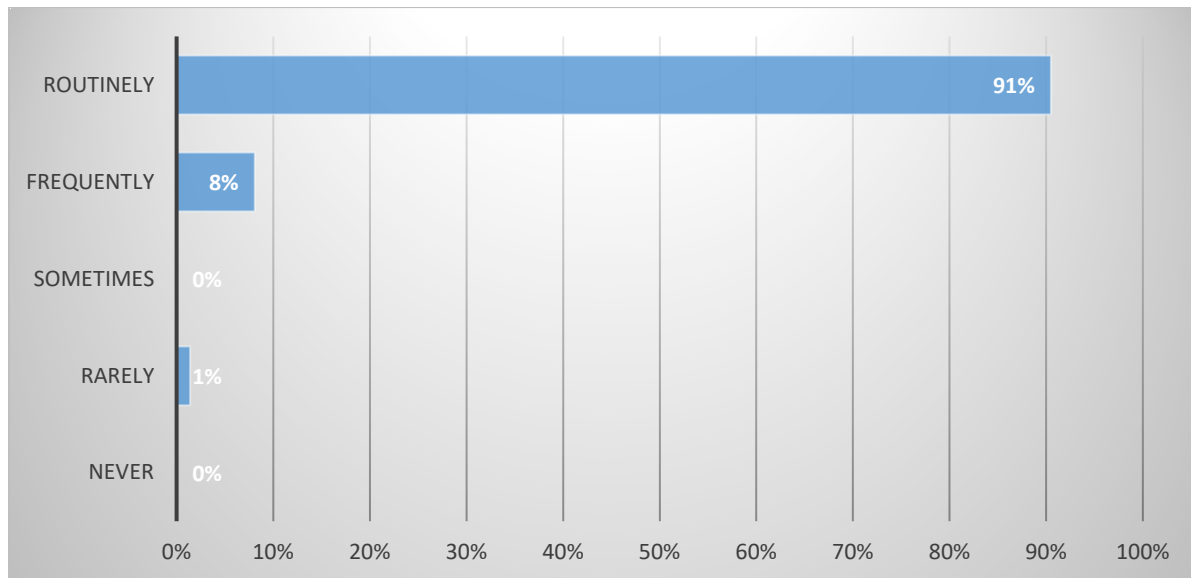
***Item 35a: How often do you utilize a health questionnaire?***



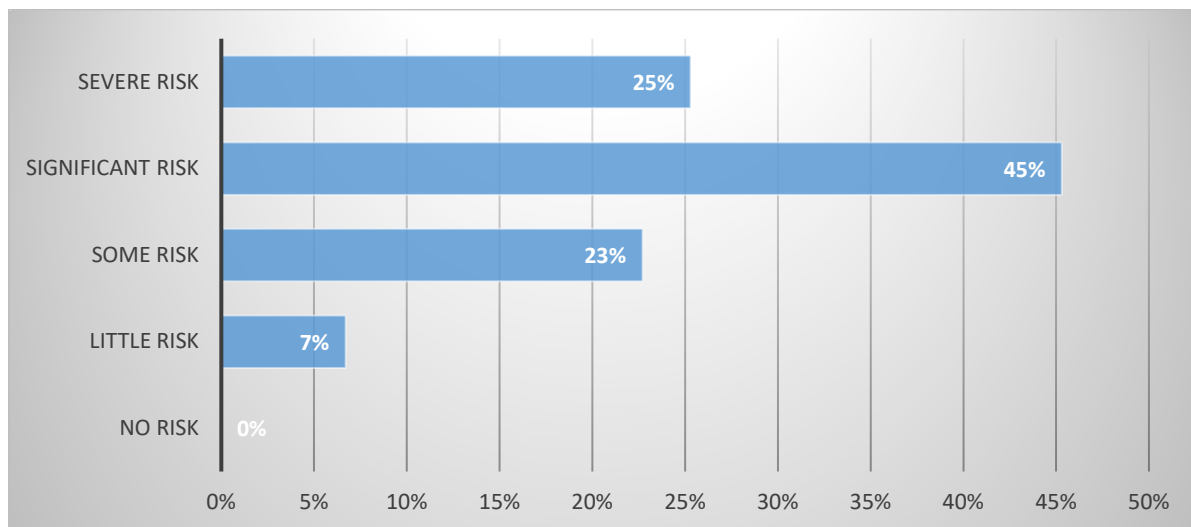
***Item 35b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



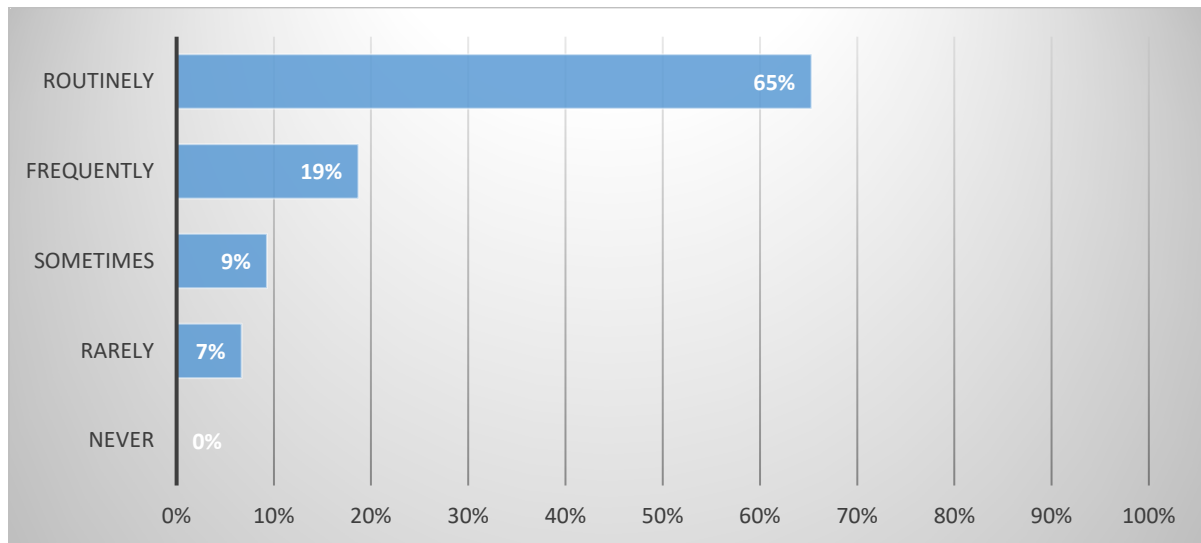
***Item 36a: How often do you obtain a list of prescription and non prescription drugs and supplements?***



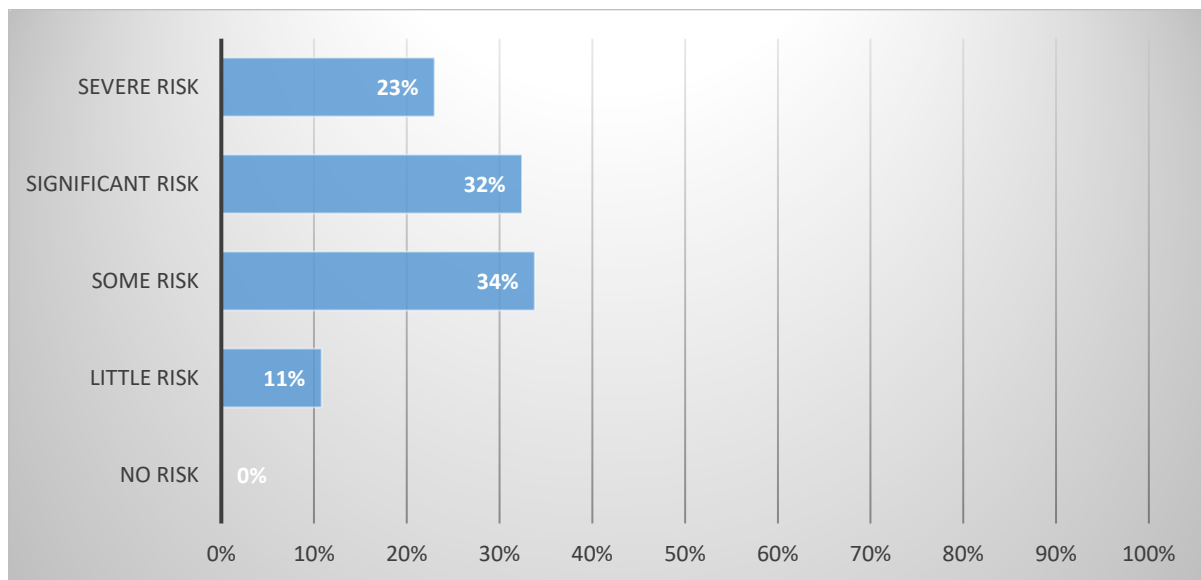
***Item 36b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



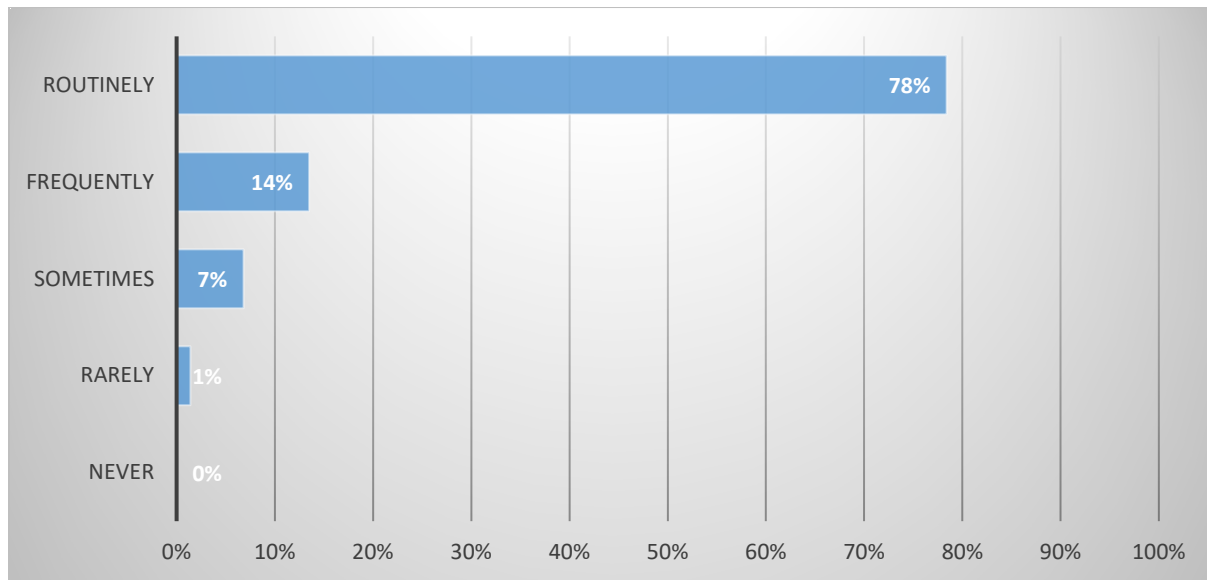
***Item 37a: How often do you inquire about use of recreational/illicit drugs?***



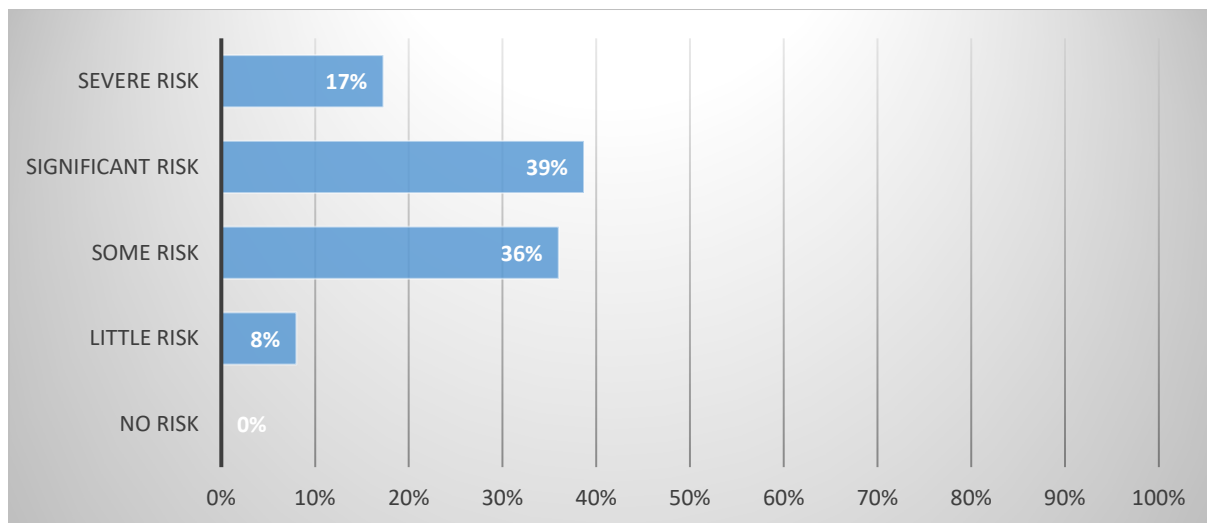
***Item 37b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



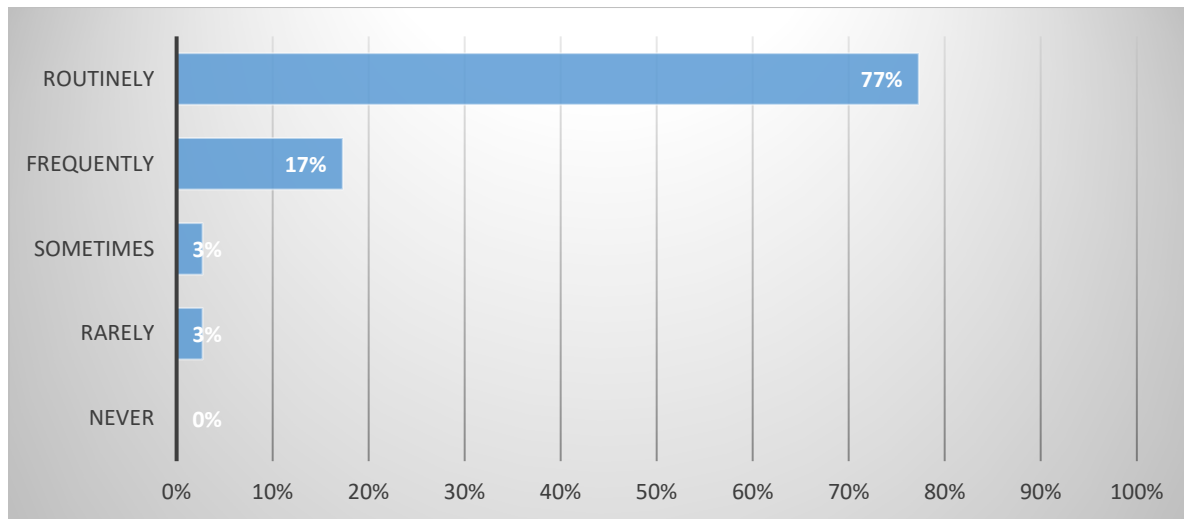
***Item 38a: How often do you inquire about the use of alcohol?***



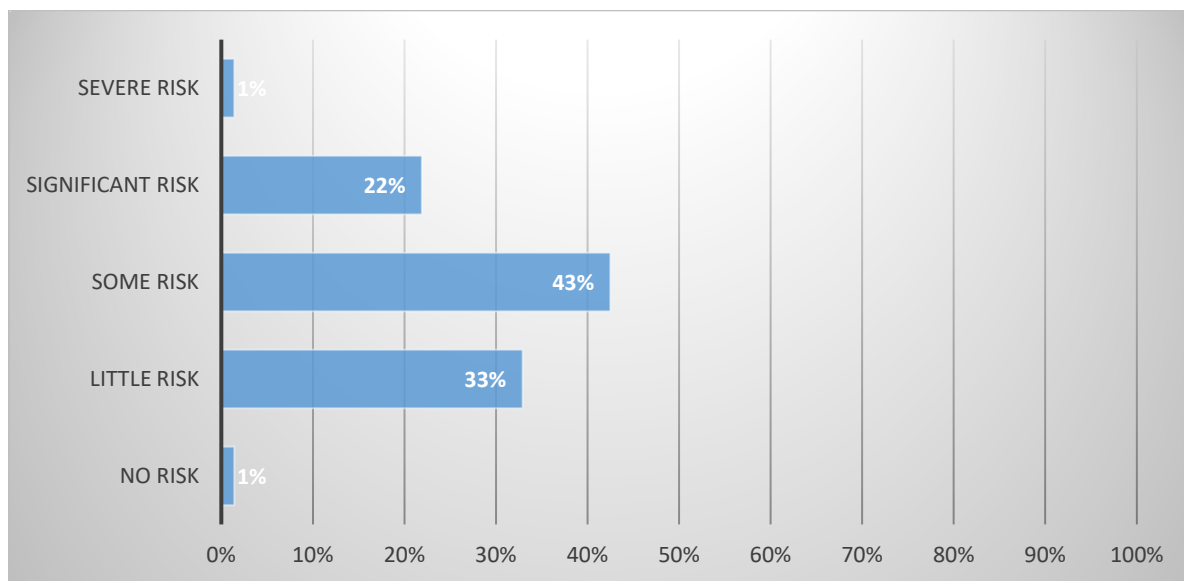
***Item 38b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



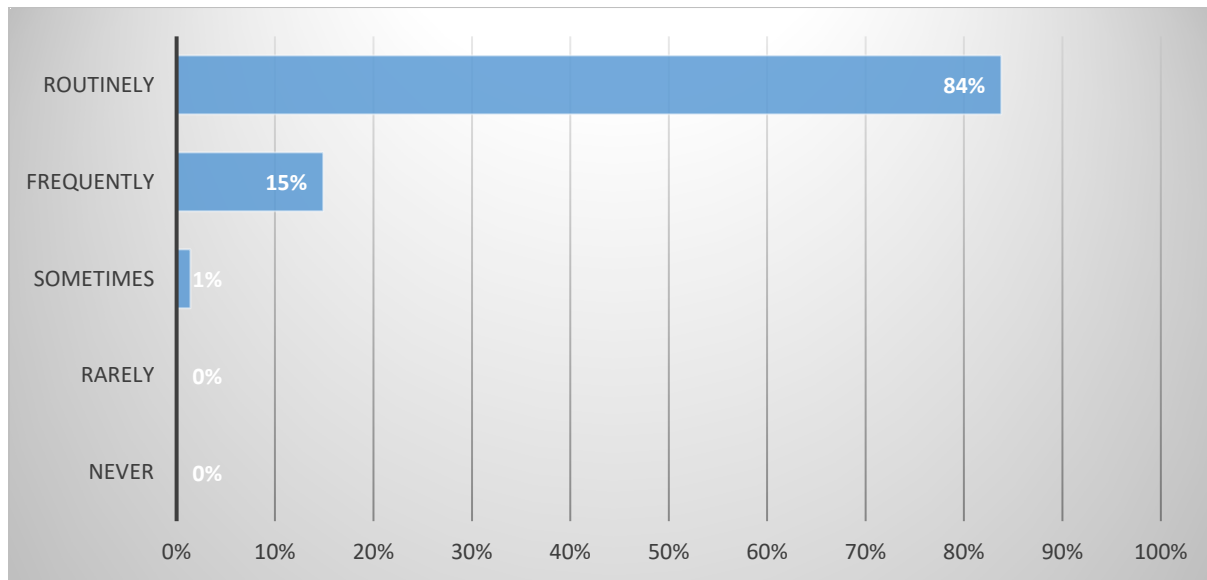
***Item 39a: How often do you inquire about the use of caffeine?***



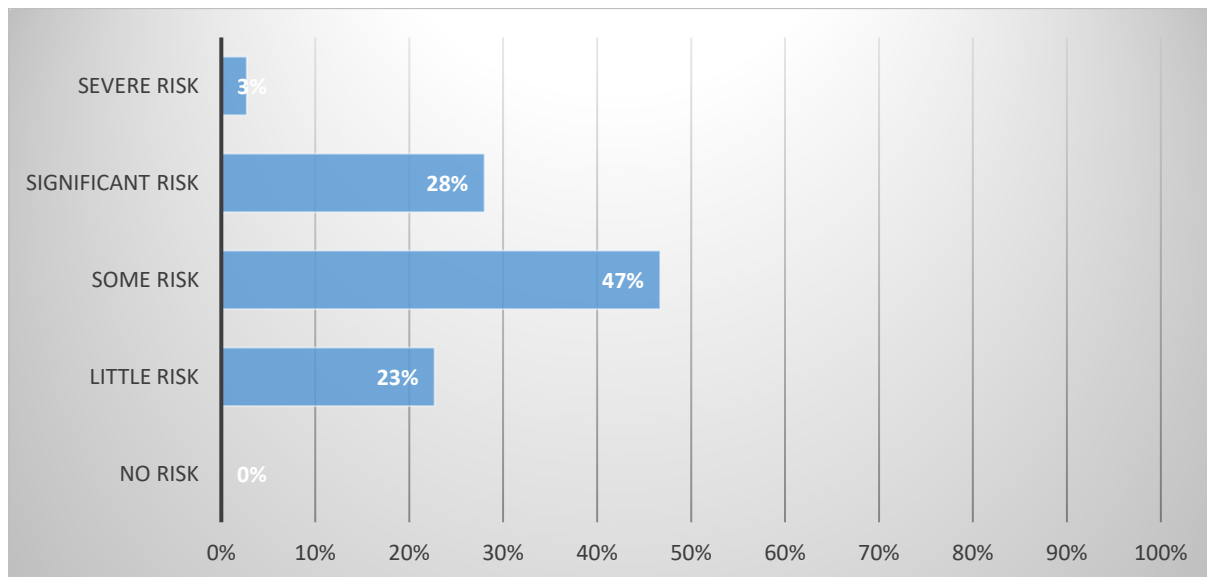
***Item 39b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 40a: How often do you inquire about exercise habits?***

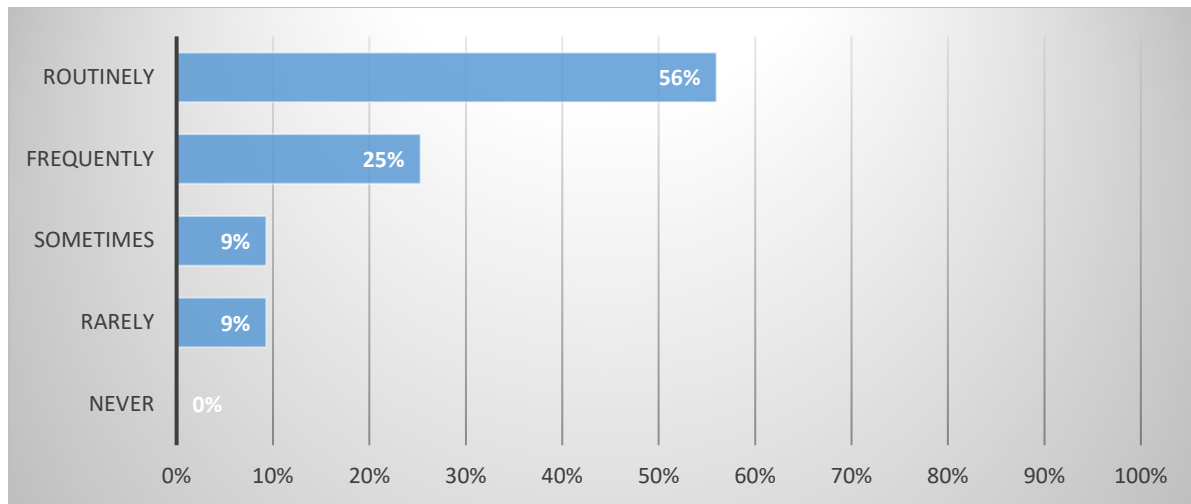


***Item 40b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

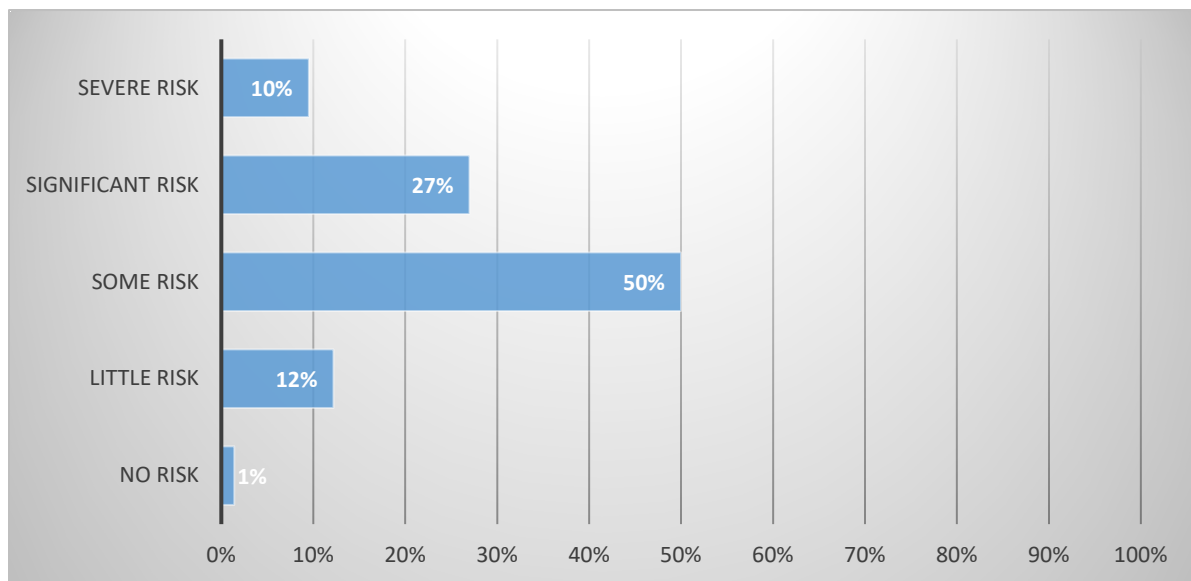




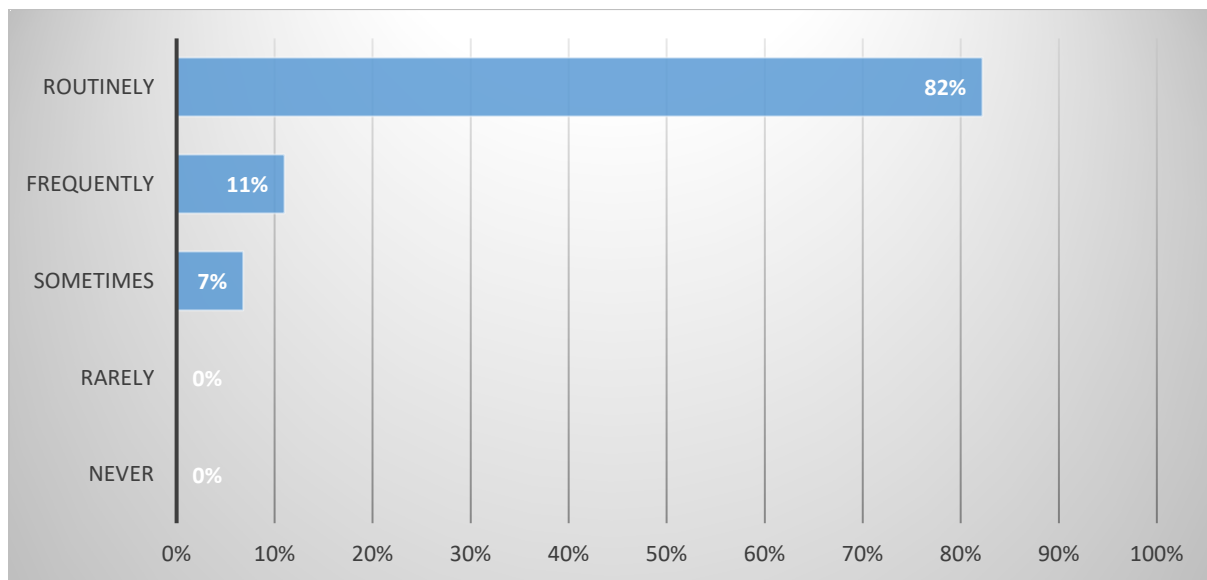
***Item 41a: How often do you obtain a psychosocial history?***



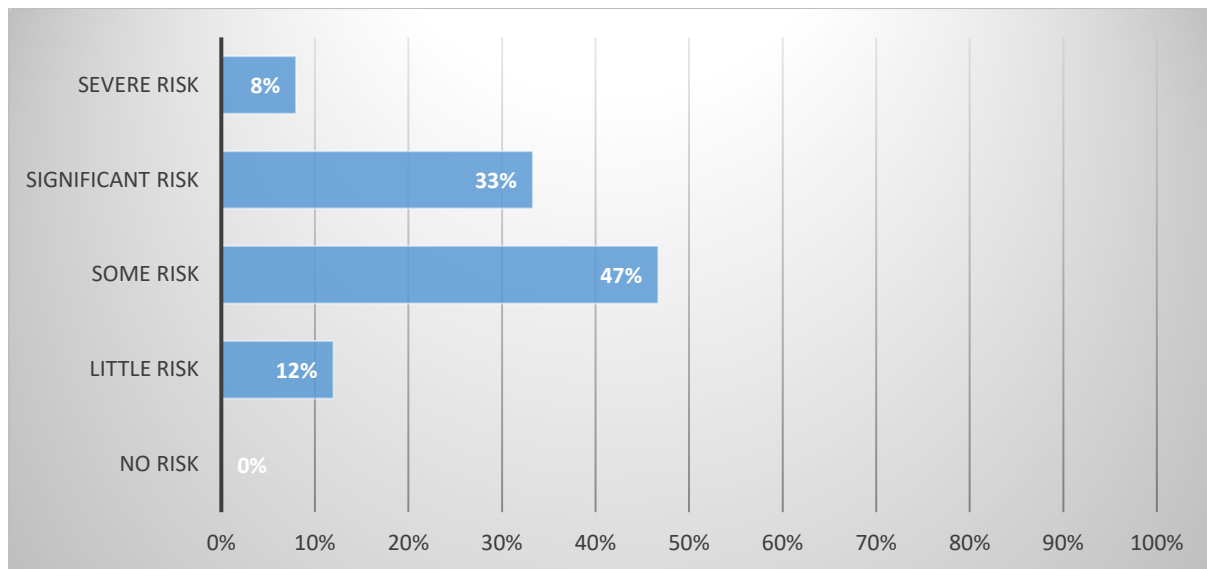
***Item 41b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



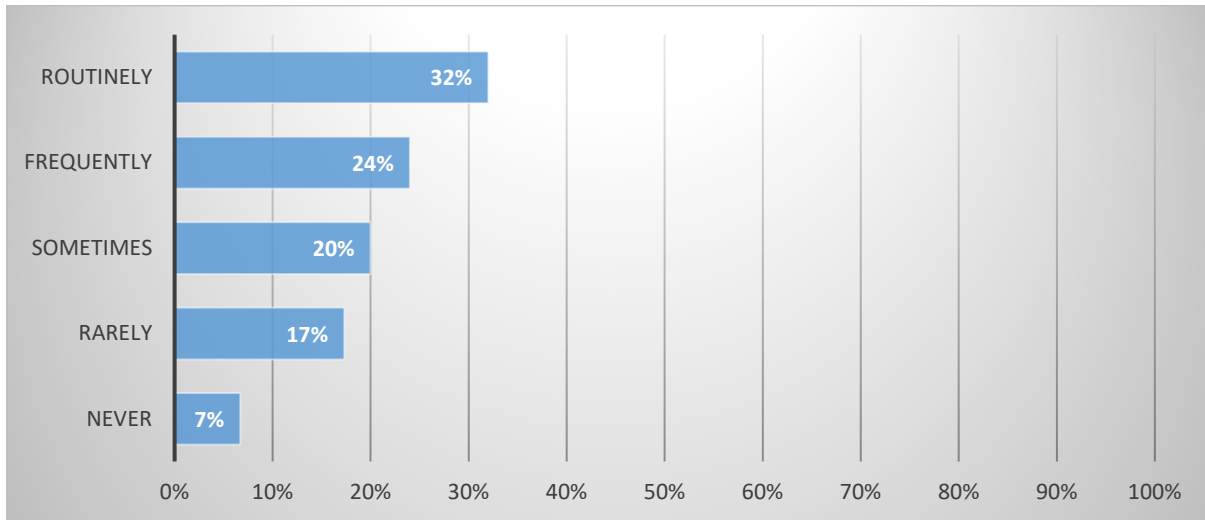
***Item 42a: How often do you obtain a family health history?***



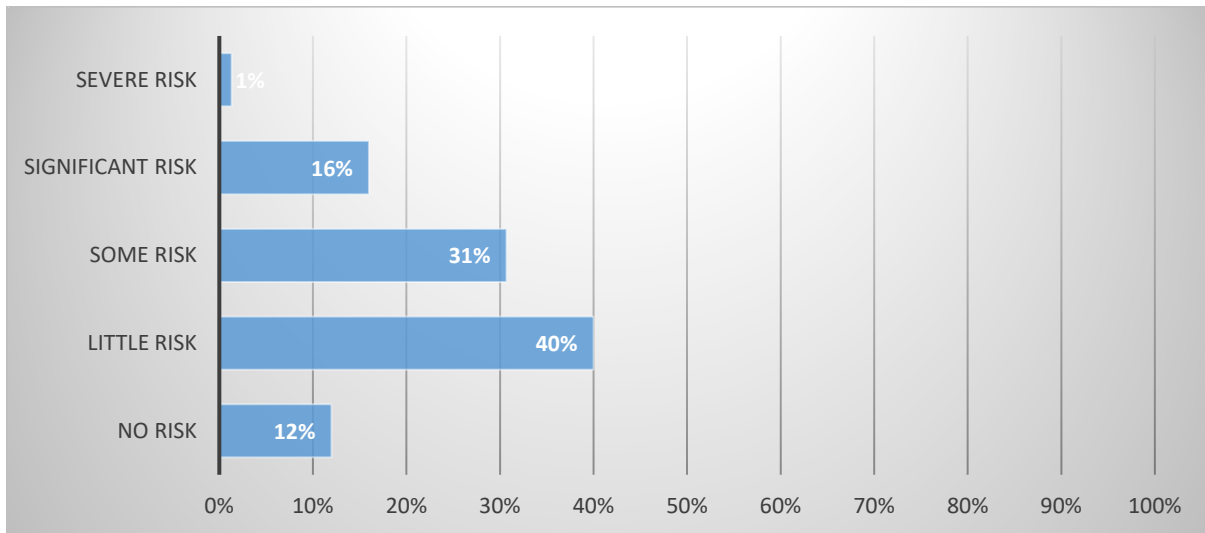
***Item 42b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



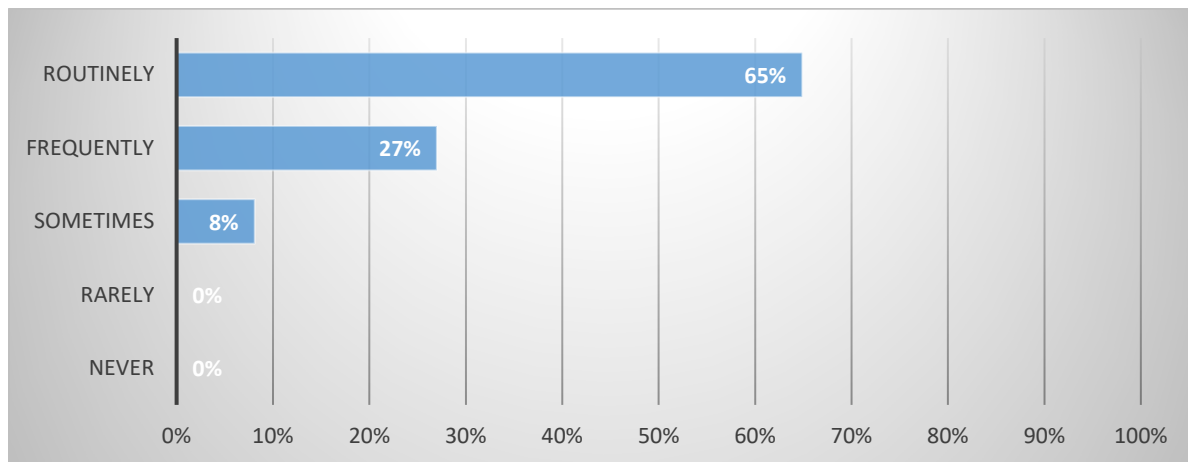
***Item 43a: How often do you inquire about religious or ethical dietary restrictions?***



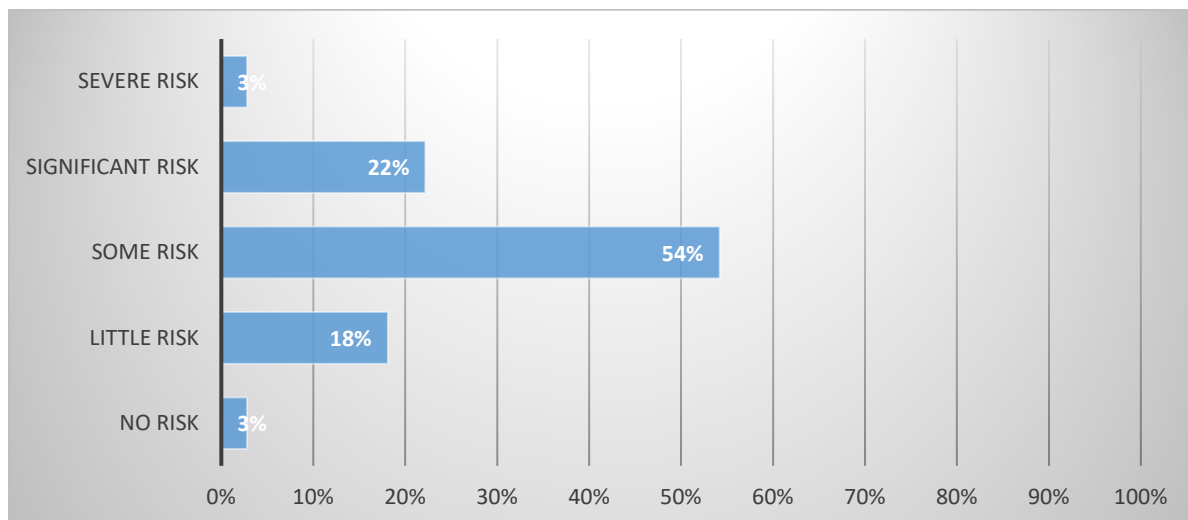
***Item 43b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



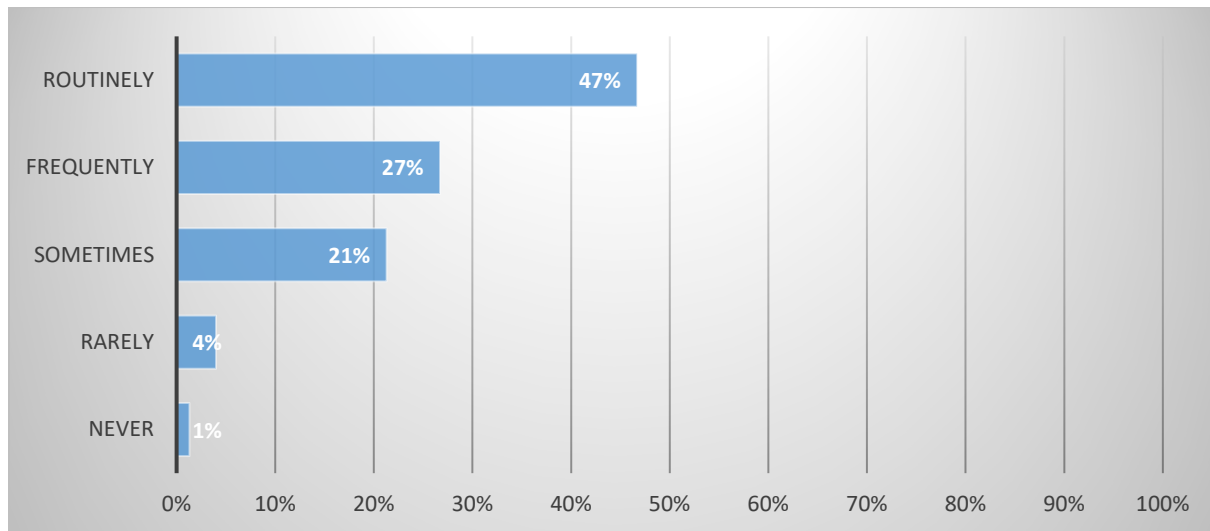
***Item 44a: How often do you inquire about any other specific diets used within the last 12 months?***



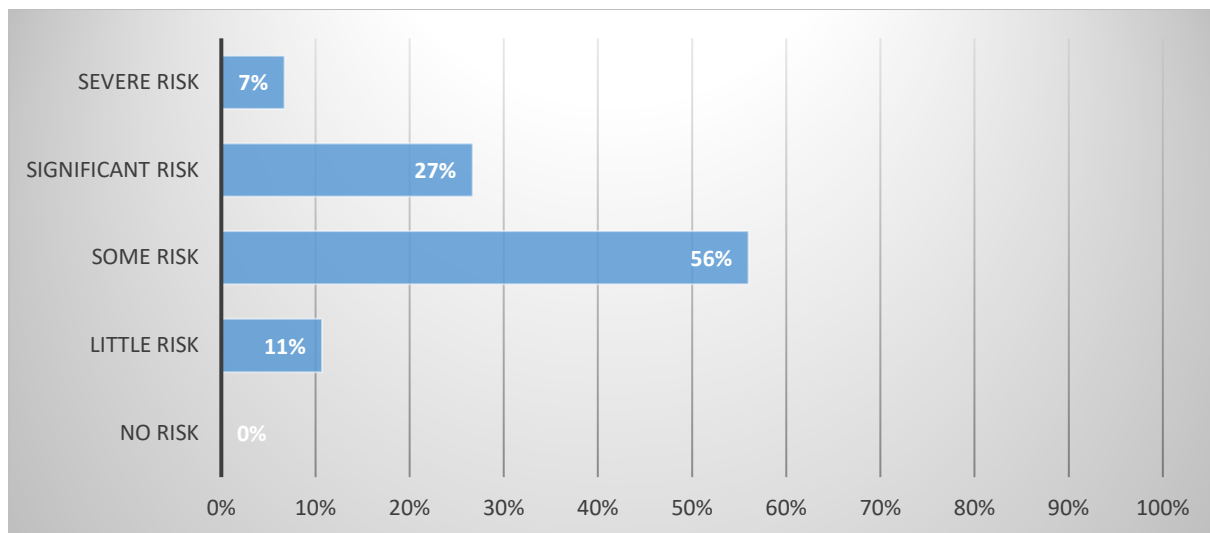
***Item 44b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



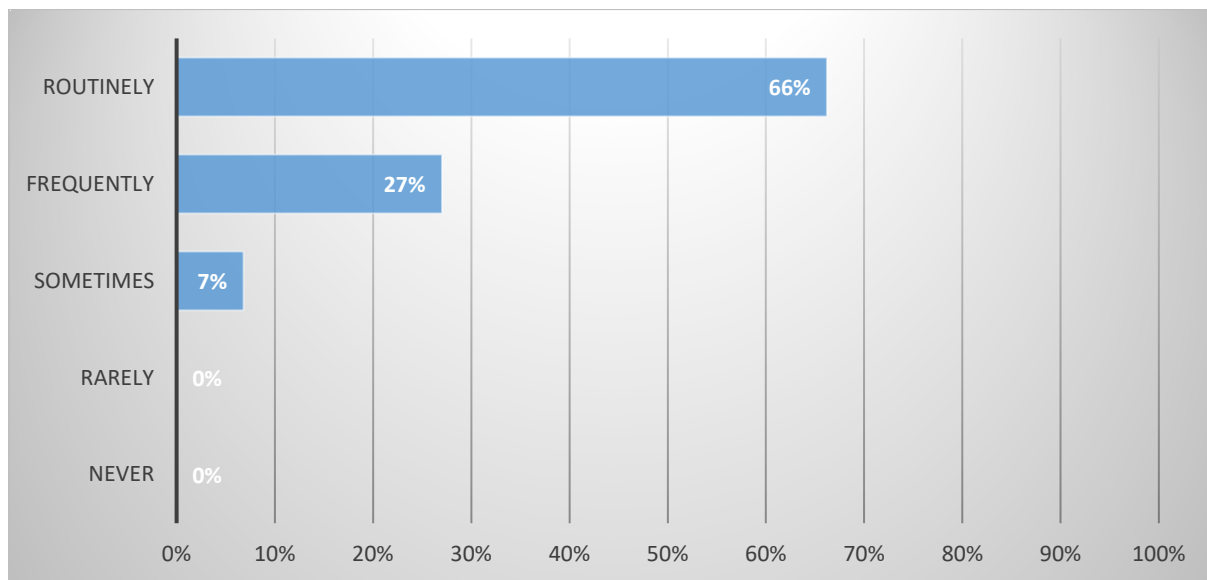
***Item 45a: How often do you review the respiratory system?***



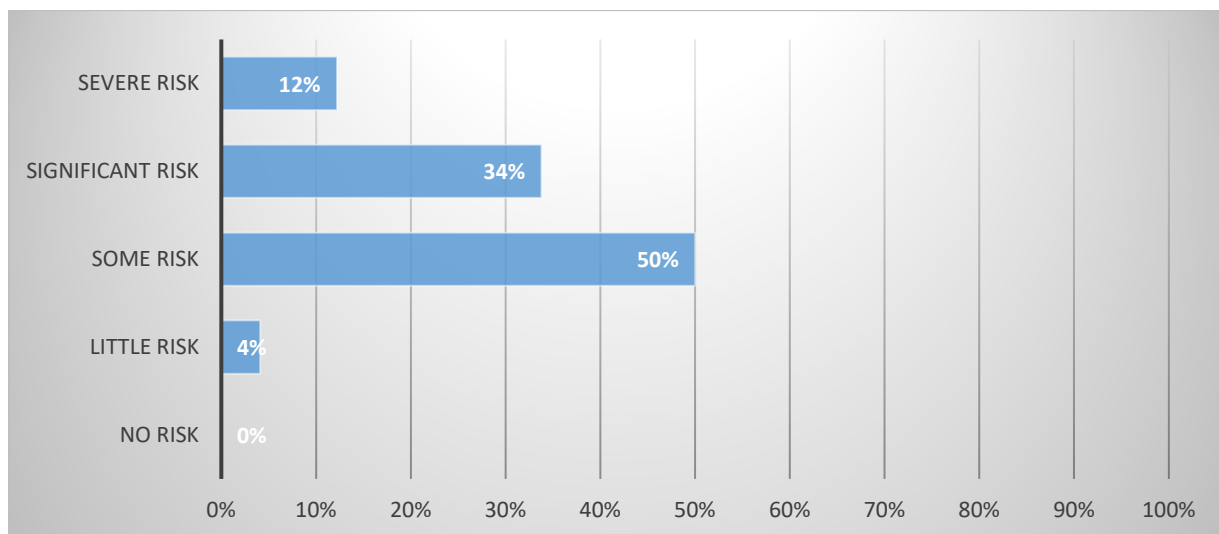
***Item 45b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



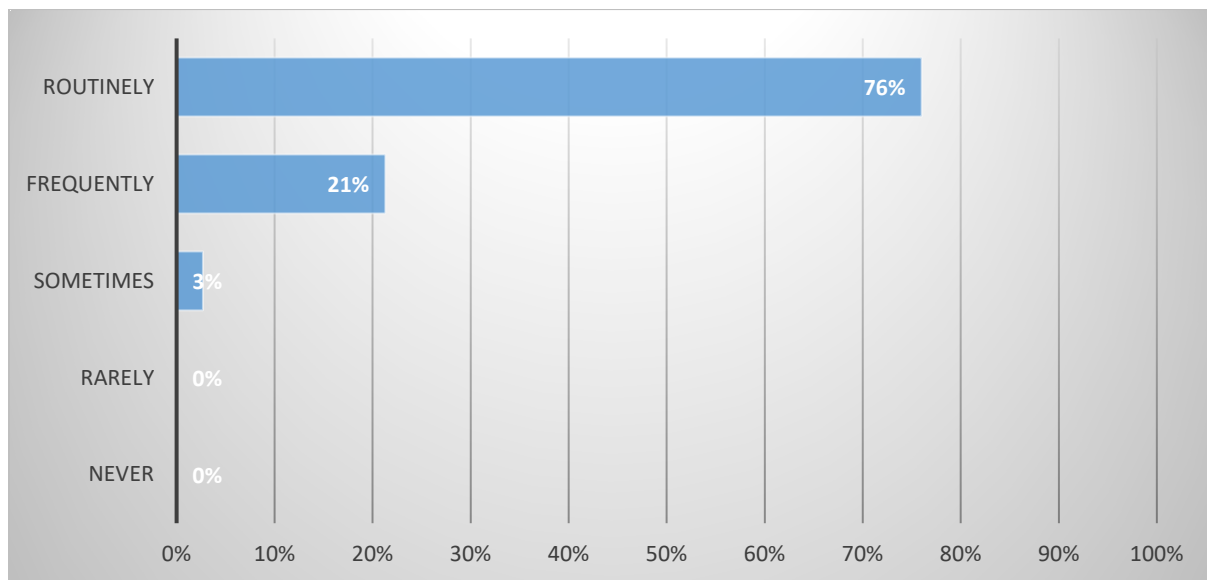
***Item 46a: How often do you review endocrine and metabolic systems?***



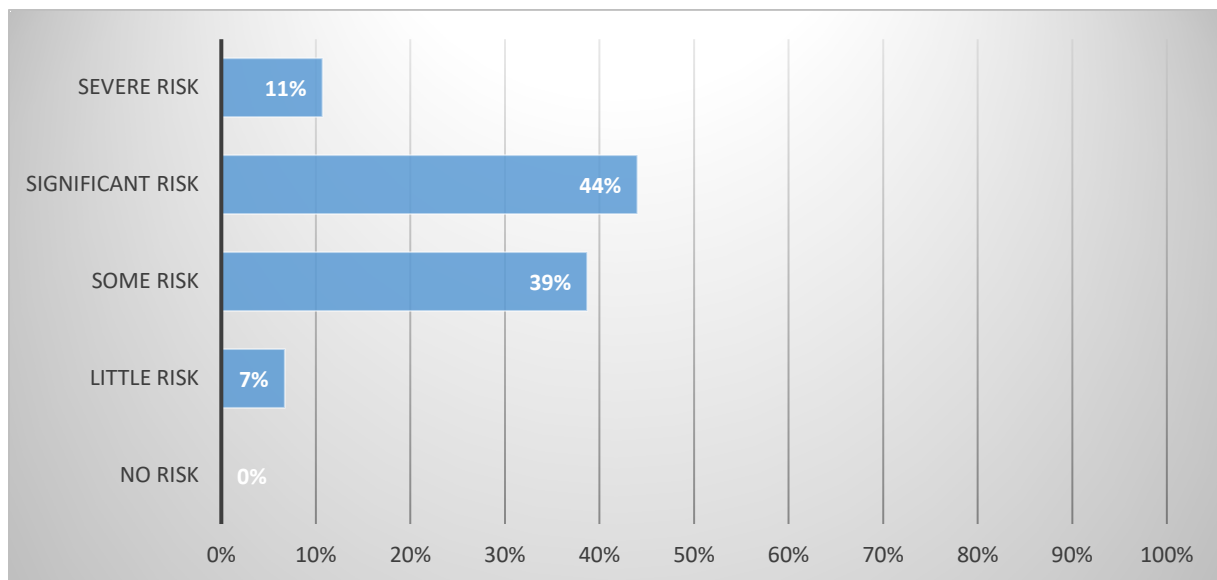
***Item 46b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



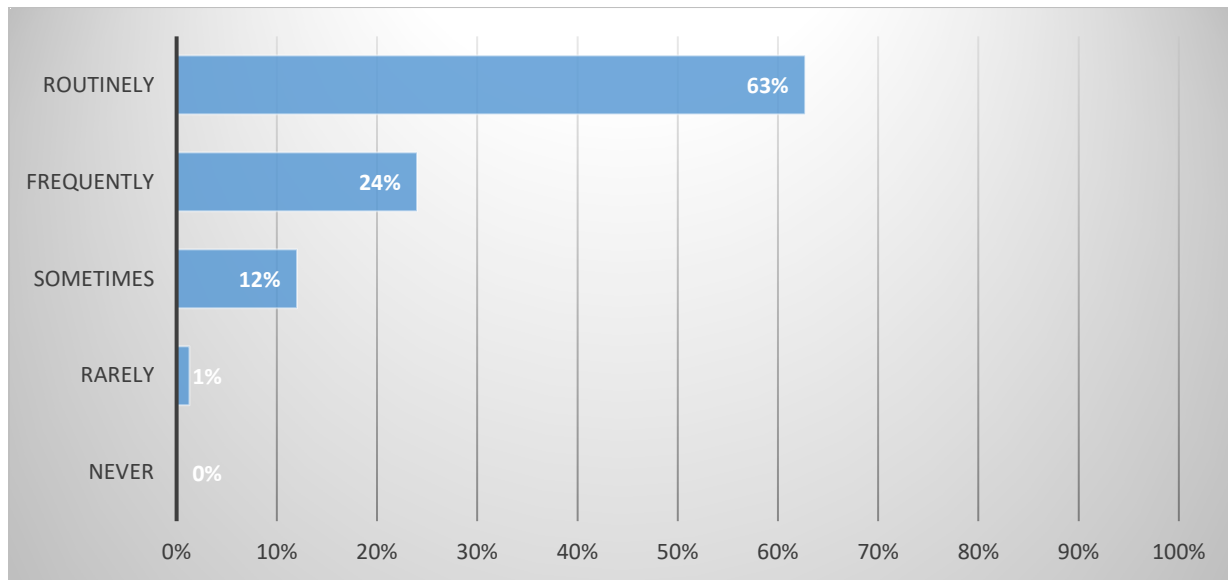
***Item 47a: How often do you review alimentary and gastrointestinal systems?***



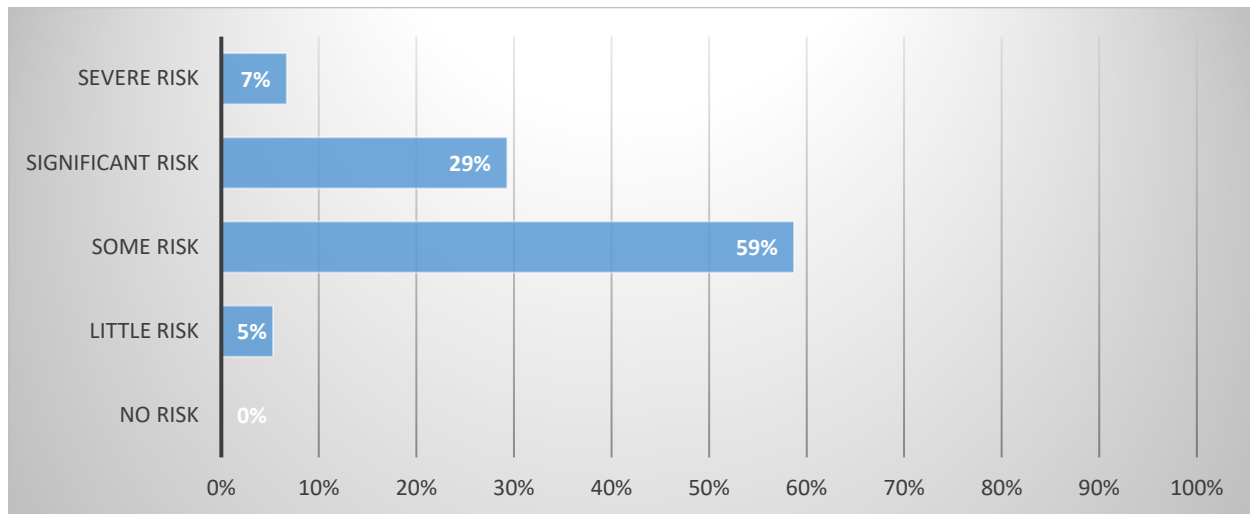
***Item 47b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 48a: How often do you review genitourinary and reproductive systems?***

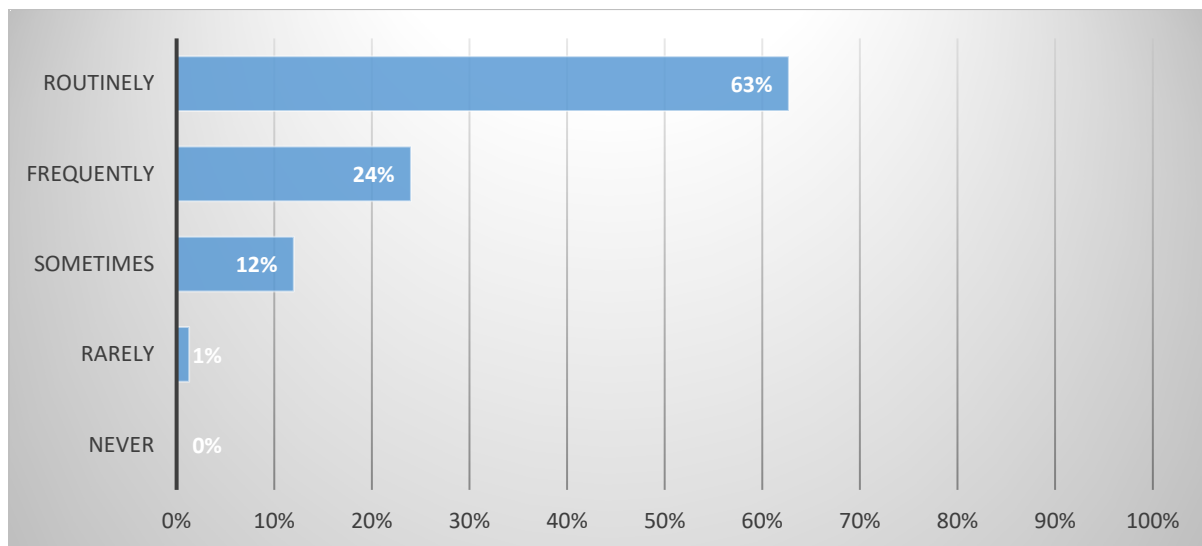


***Item 48b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

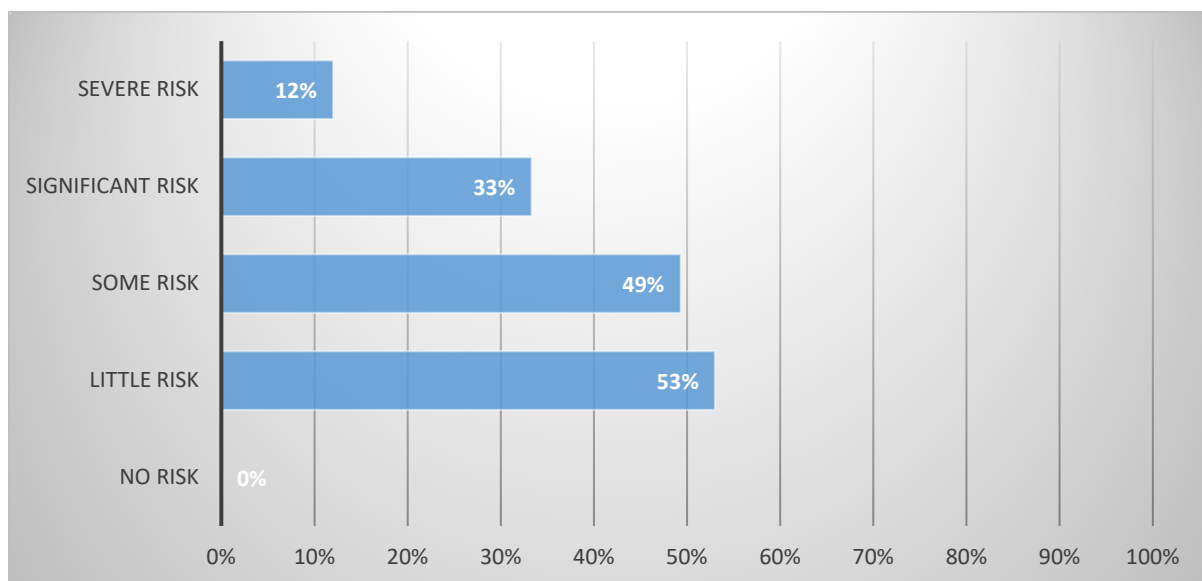




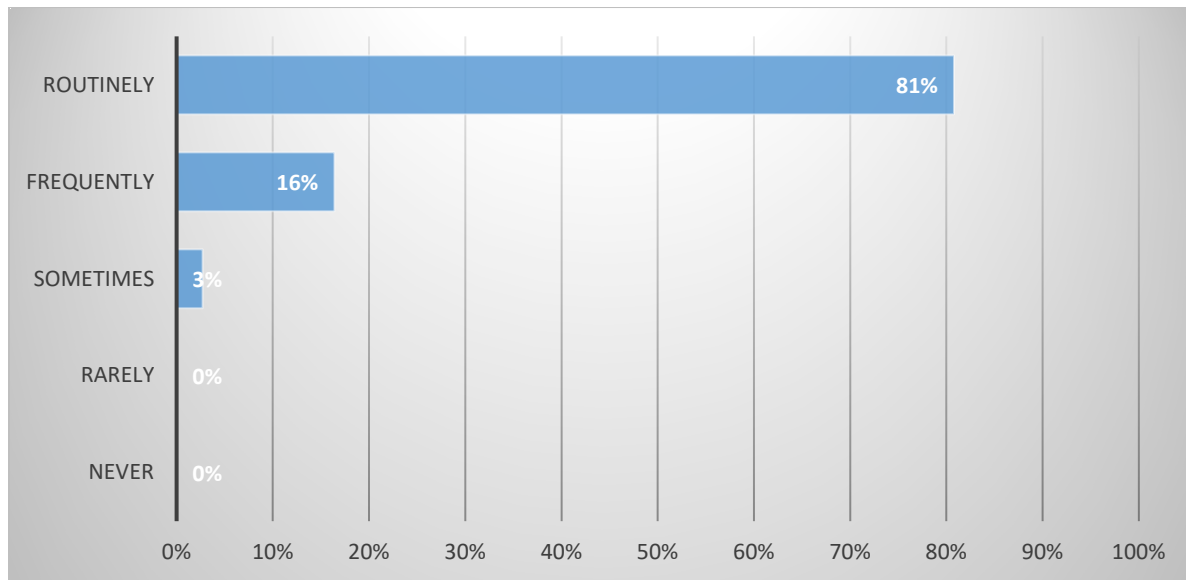
***Item 49a: How often do you review the hematological/hematopoietic system?***



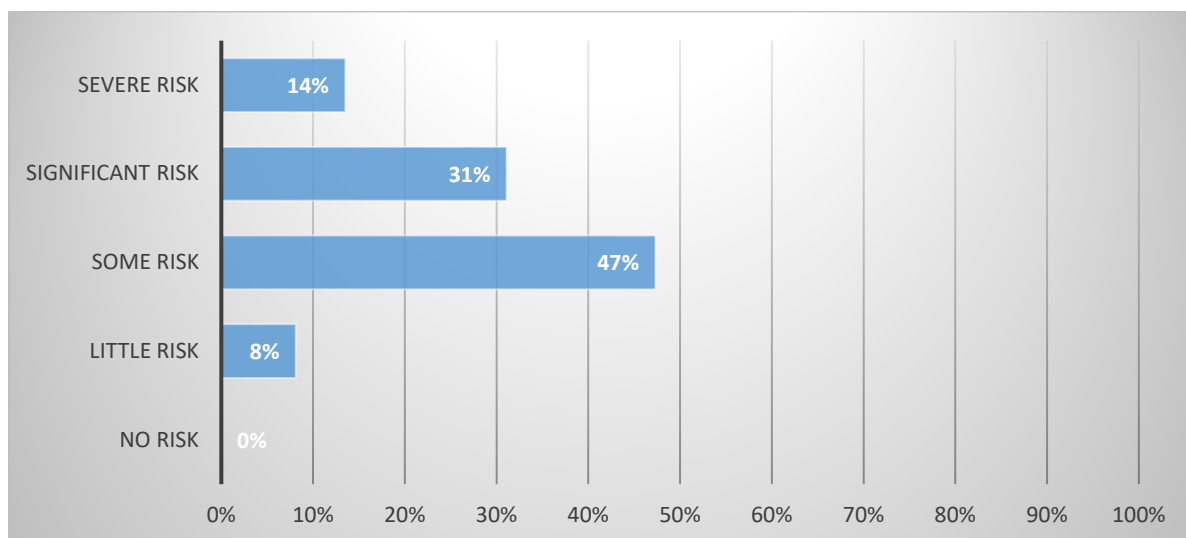
***Item 49b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



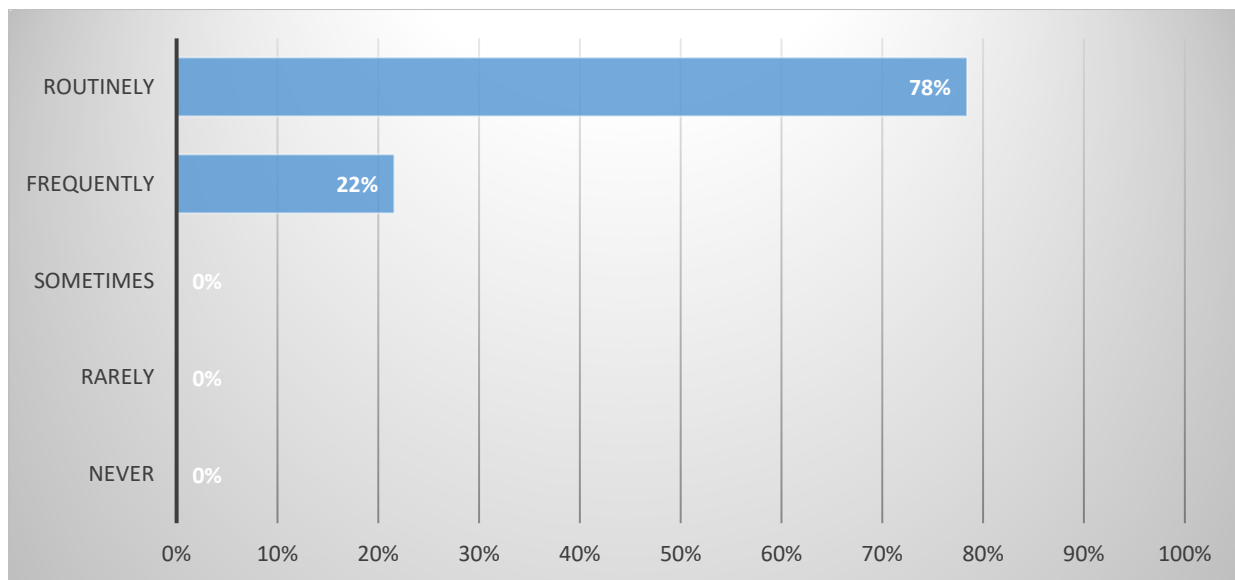
***Item 50a: How often do you review the musculoskeletal system?***



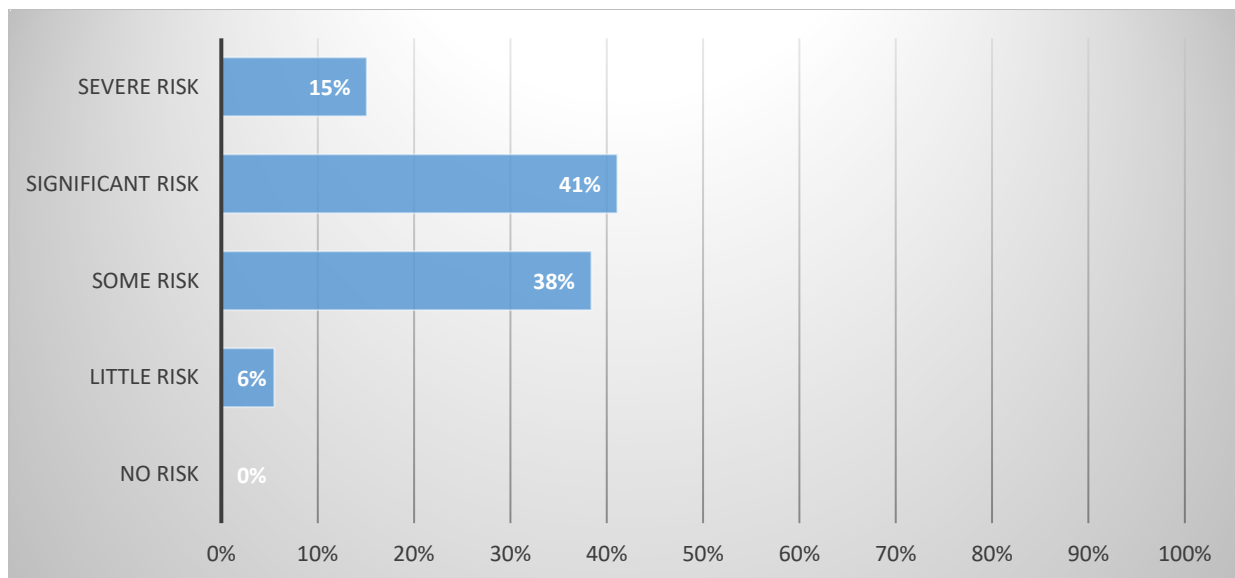
***Item 50b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



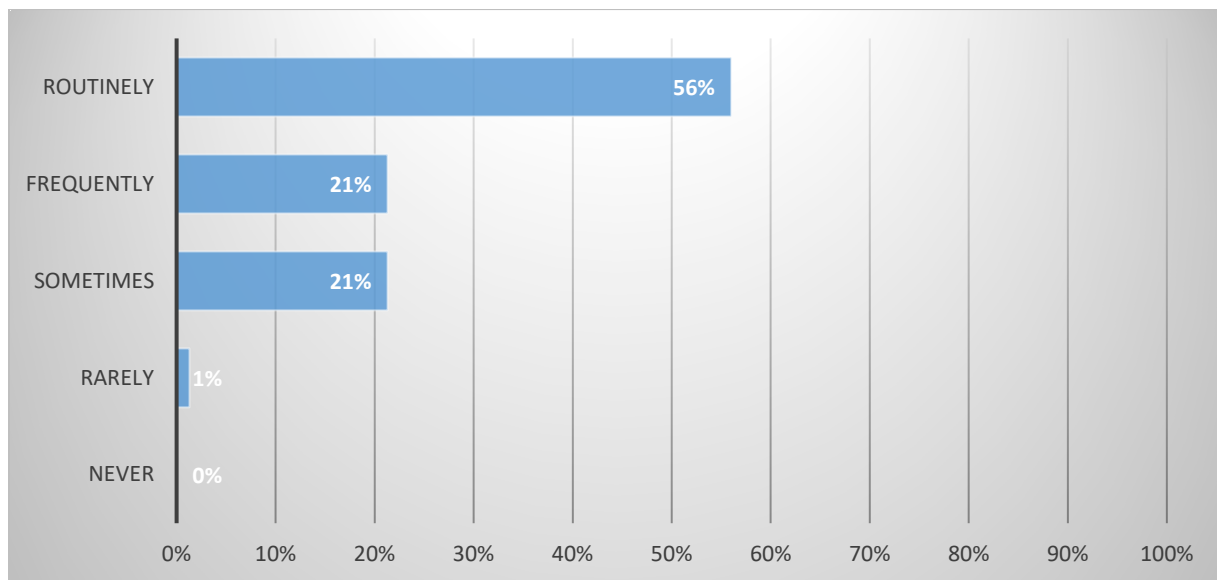
***Item 51a: How often do you review the nervous system?***



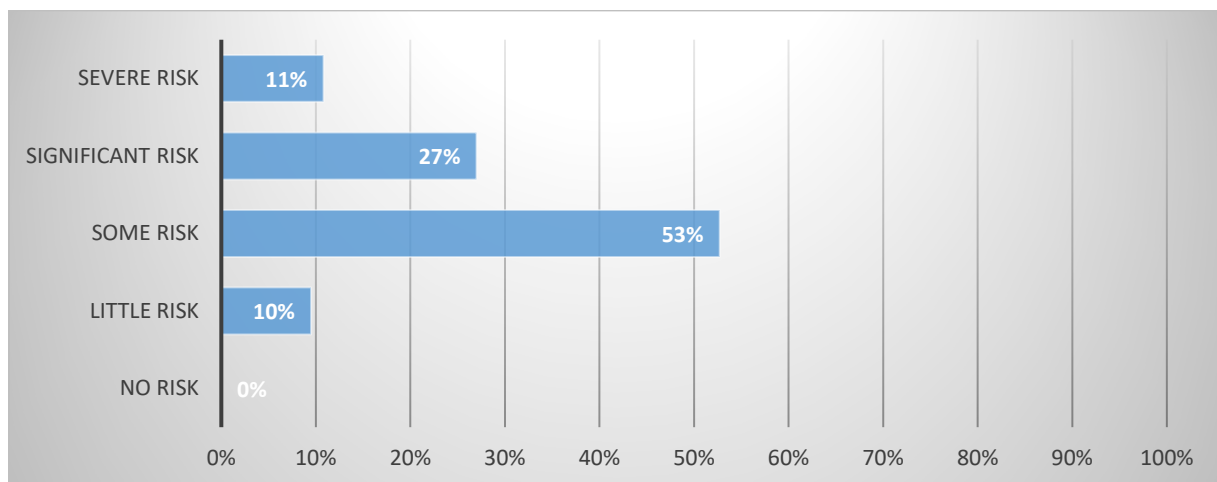
***Item 51b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



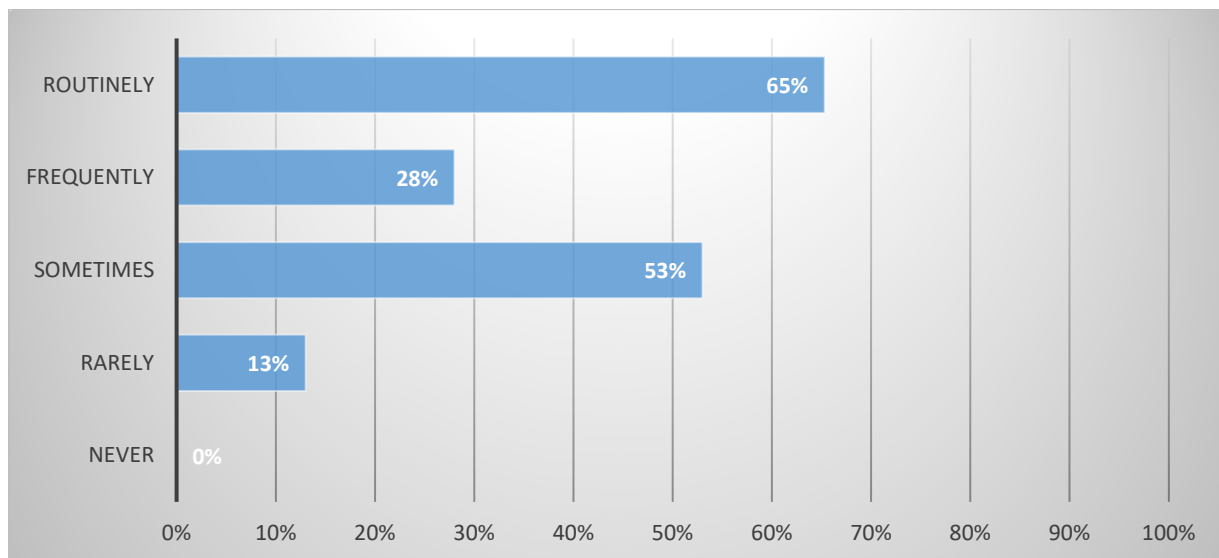
***Item 52a: How often do you review psychological /psychiatric/mental health status?***



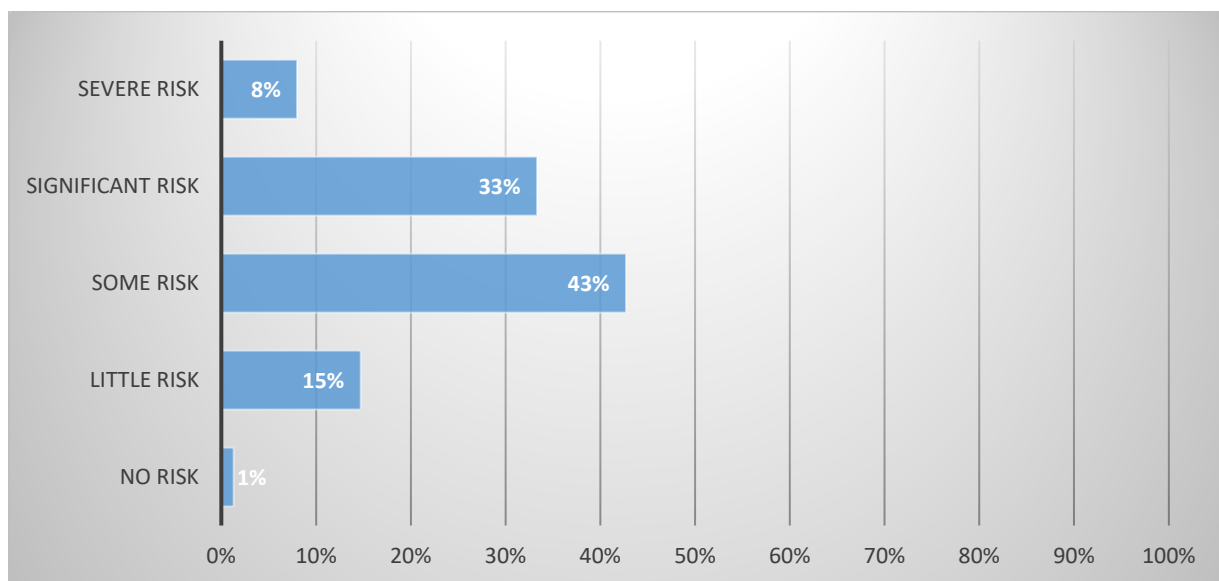
***Item 52b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



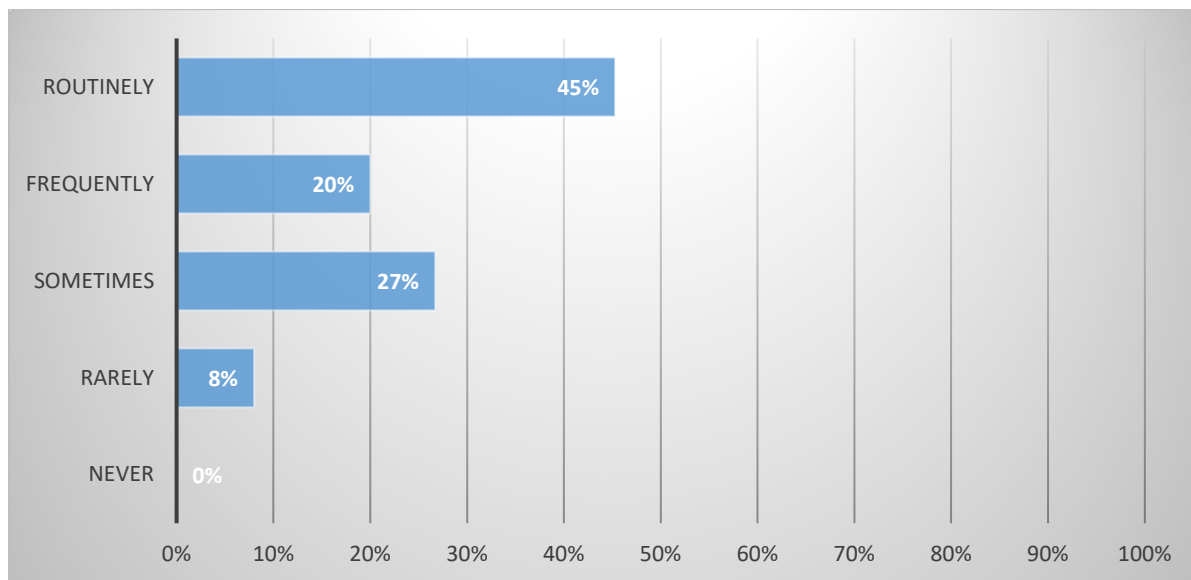
***Item 53a: How often do you review skin conditions and allergies?***



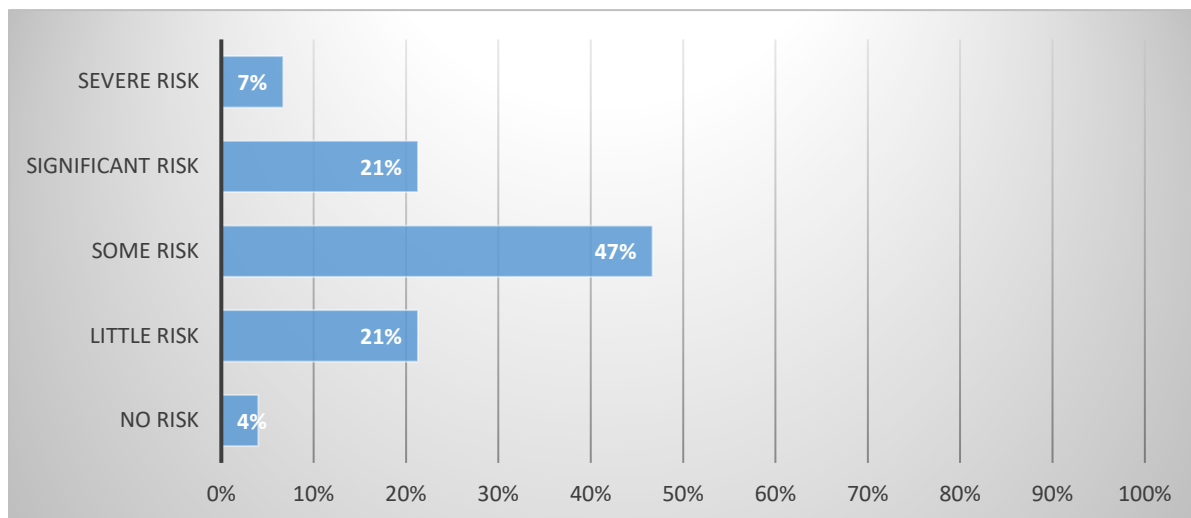
***Item 53b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



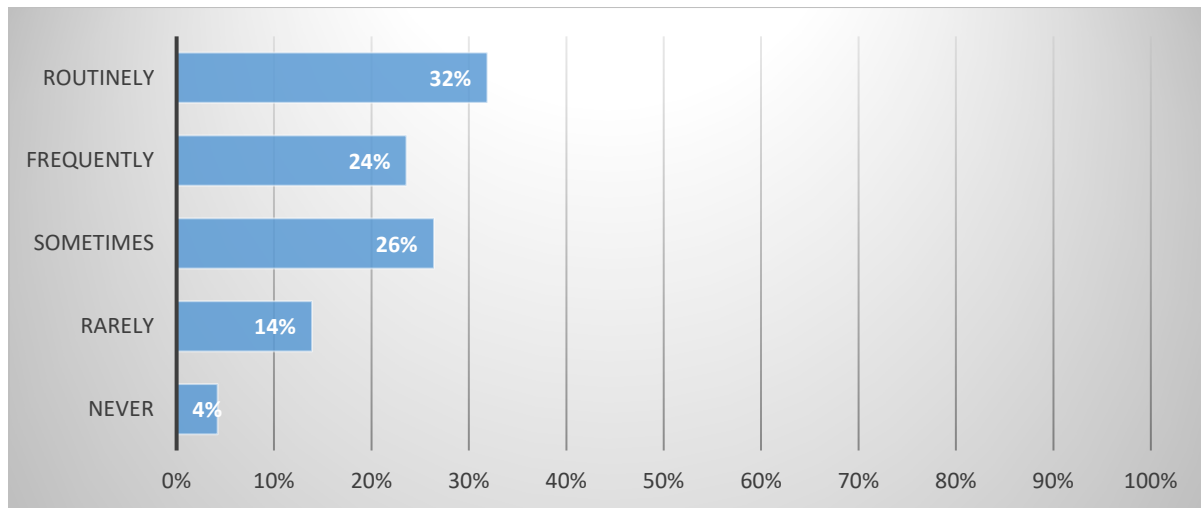
***Item 54a: How often do you review other problems or information not listed above?***



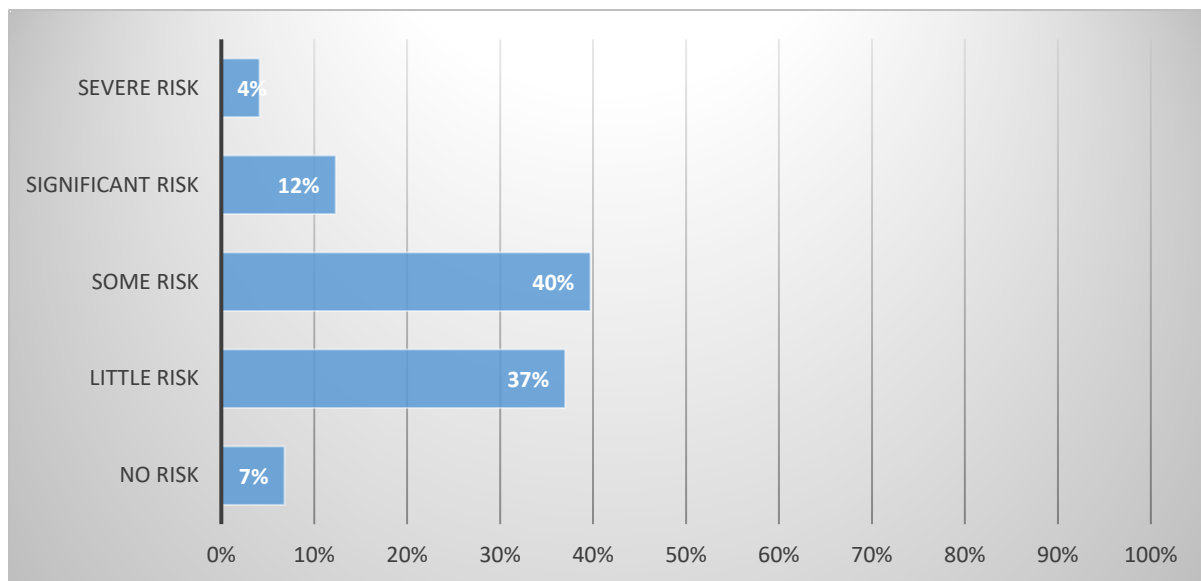
***Item 54b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



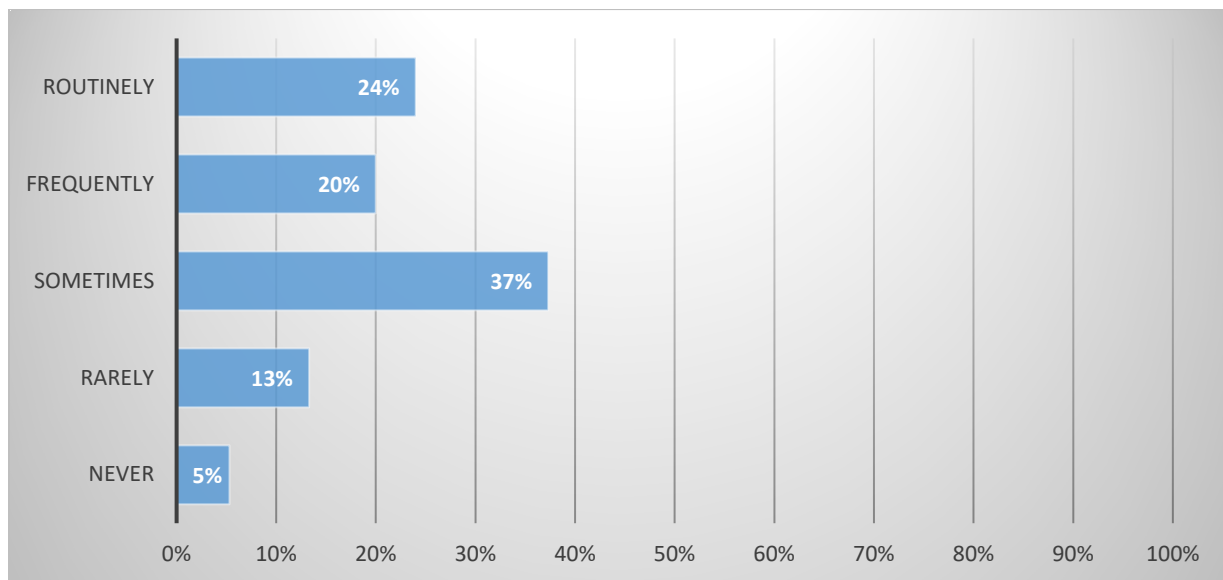
***Item 55a: How often do you obtain a 24 hour diet recall?***



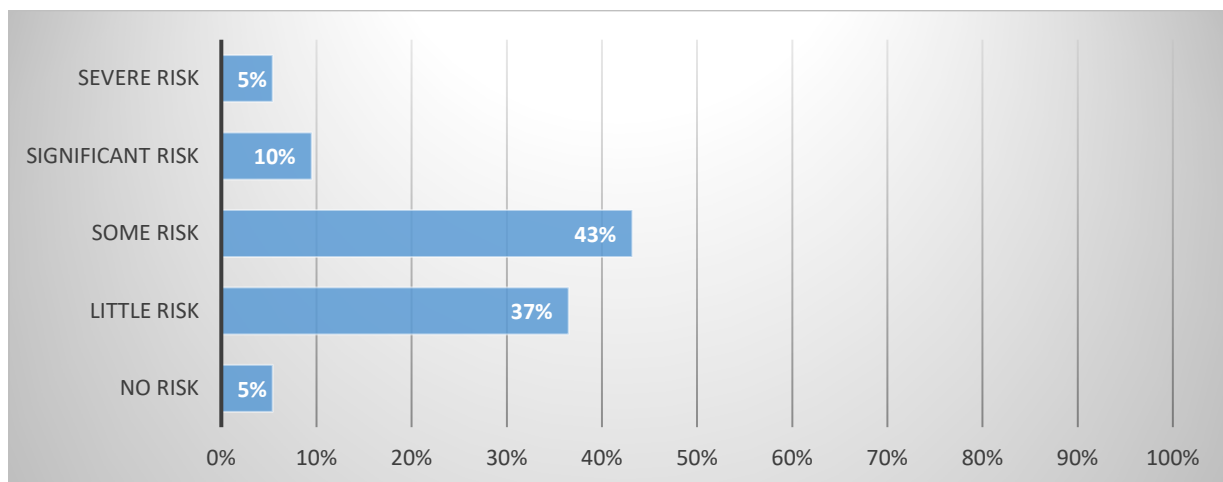
***Item 55b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 56a: How often do you obtain a three—day diet diary?***

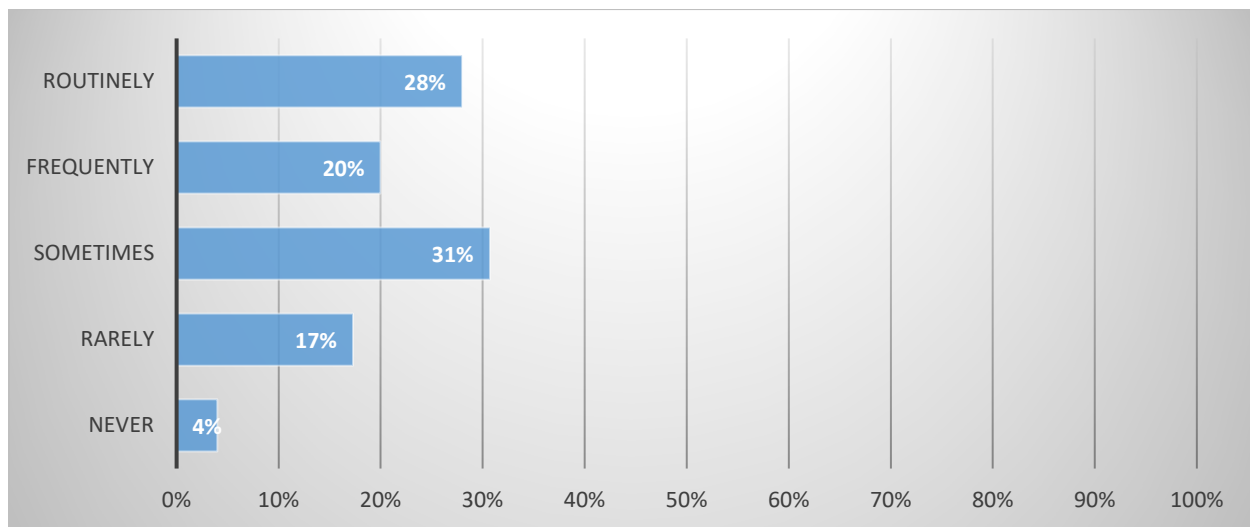


***Item 56b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

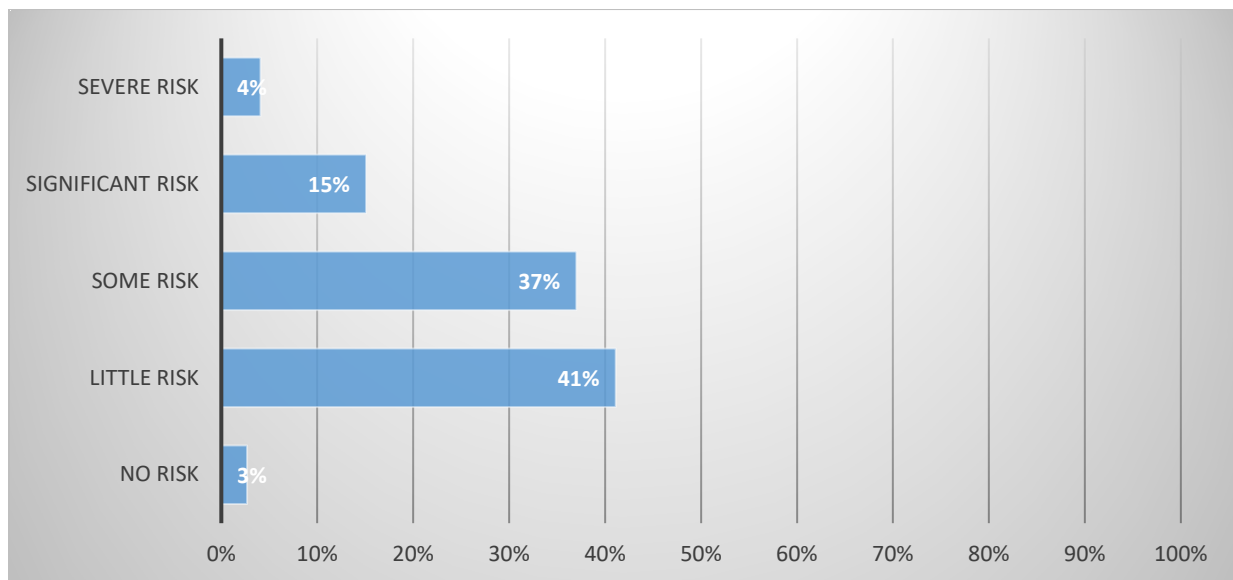




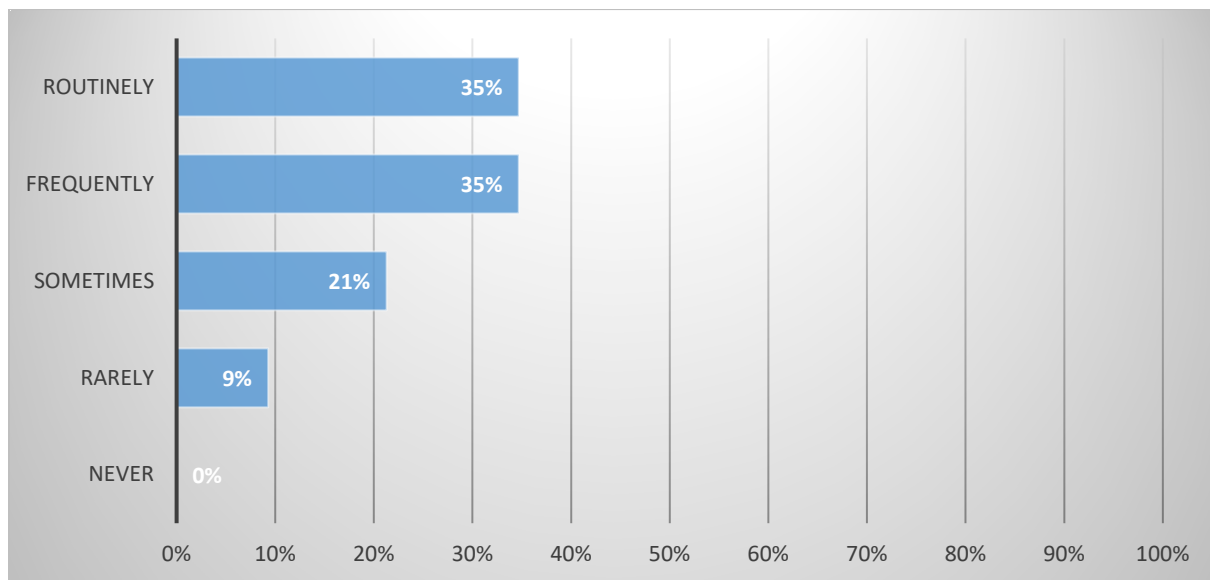
***Item 57a: How often do you obtain a 7 -day diet diary?***



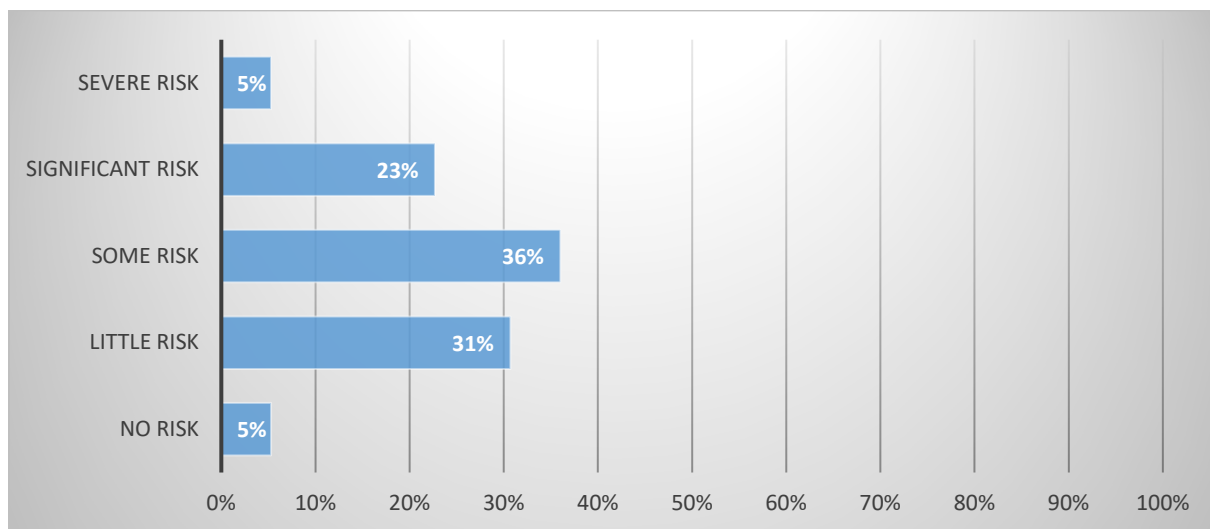
***Item 57b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



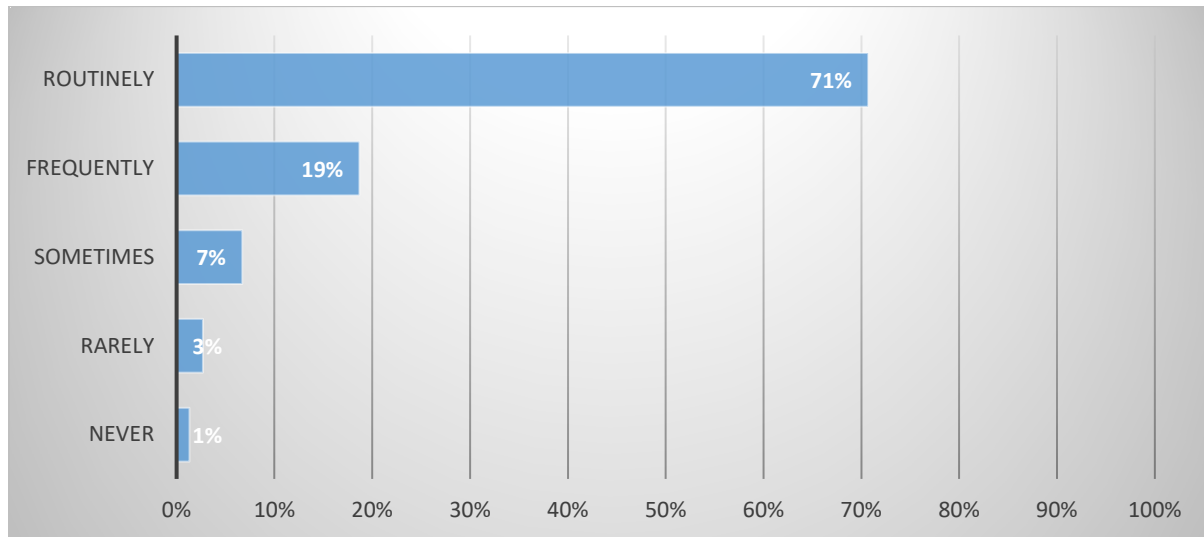
***Item 58a: How often do you review a diet diary with patient?***



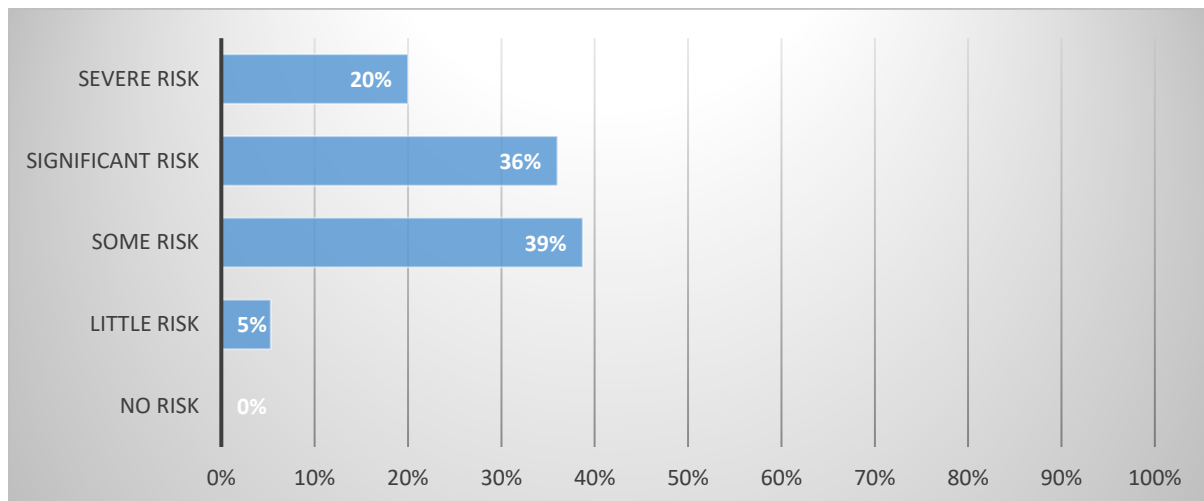
***Item 58b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



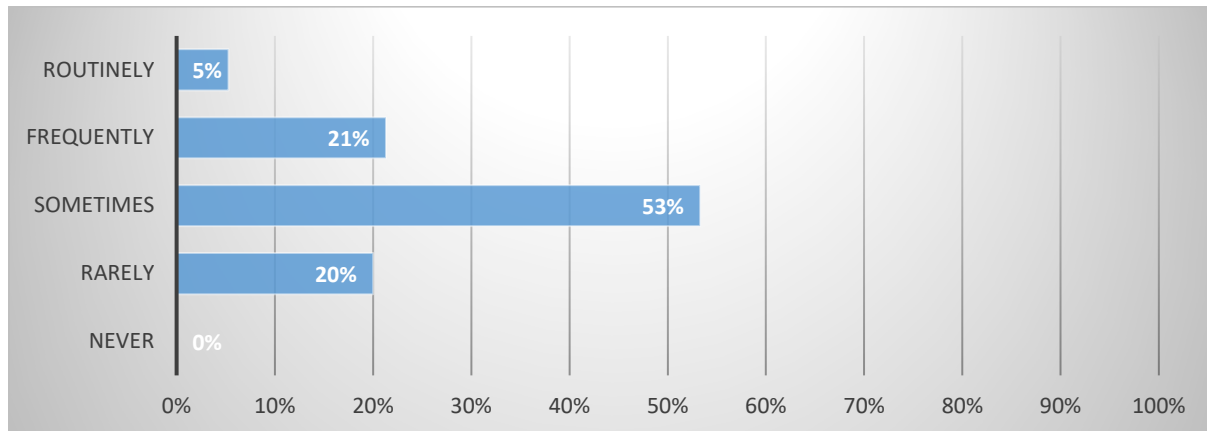
***Item 59a: How often do you obtain vital signs?***



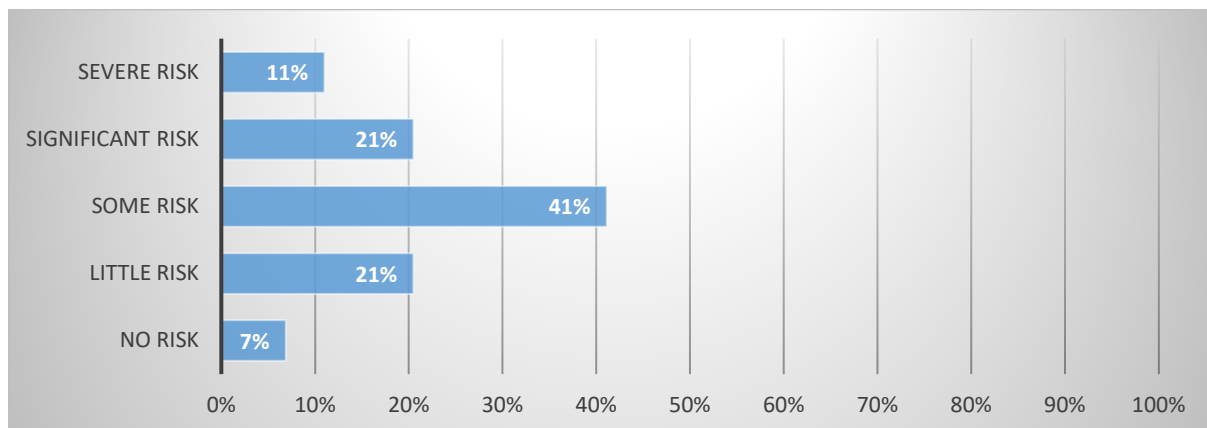
***Item 59b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



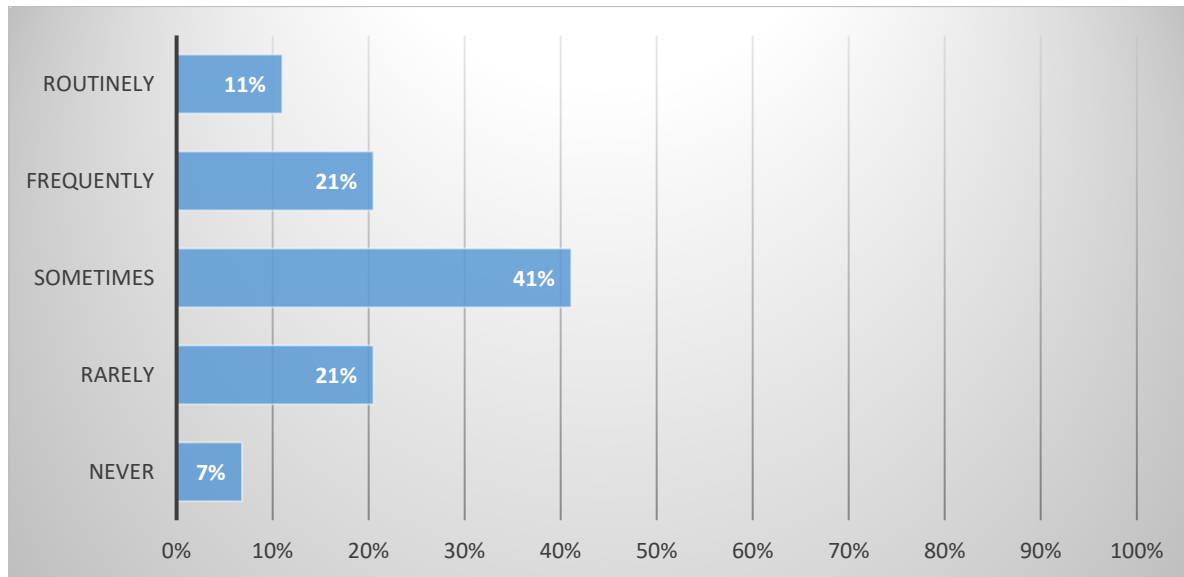
***Item 60a: How often do you inspect hair, nails, skin, tongue, etc.?***



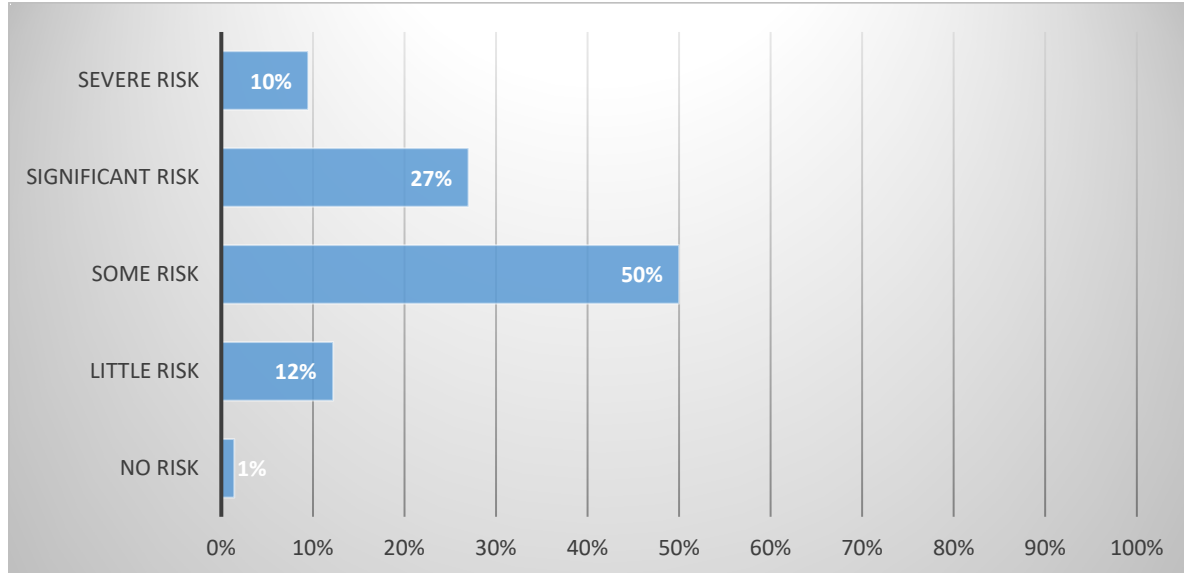
***Item 60b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



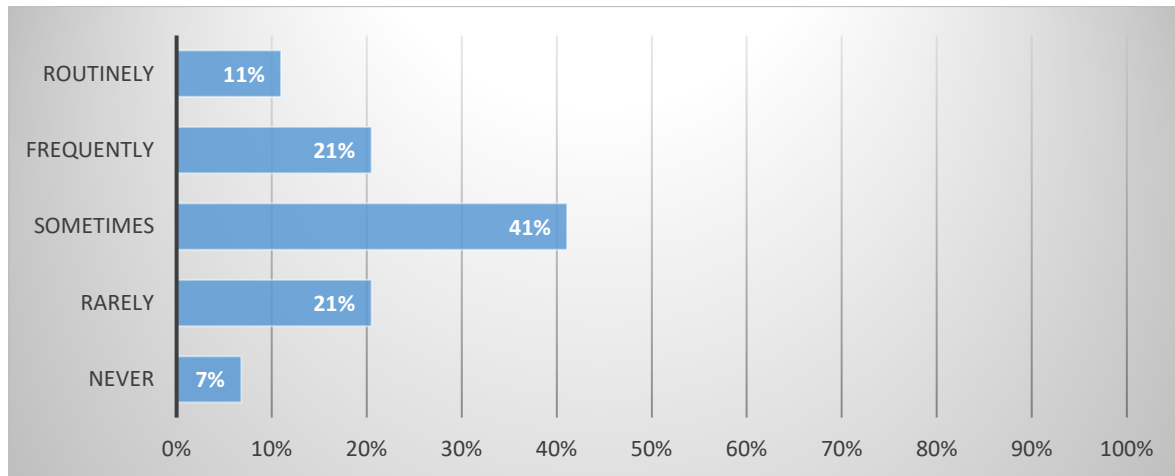
***Item 61a: How often do you perform an ENT examination?***



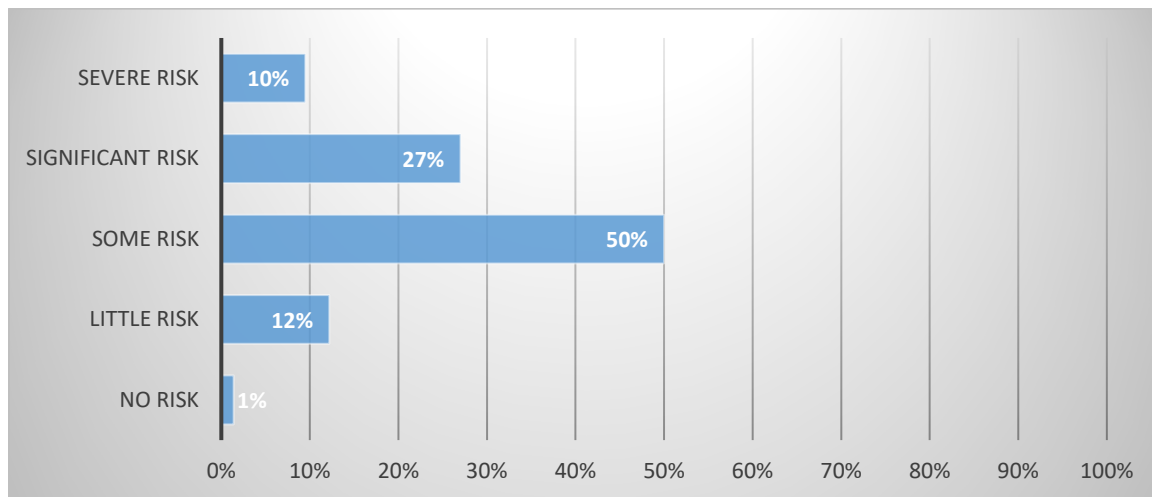
***Item 61b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



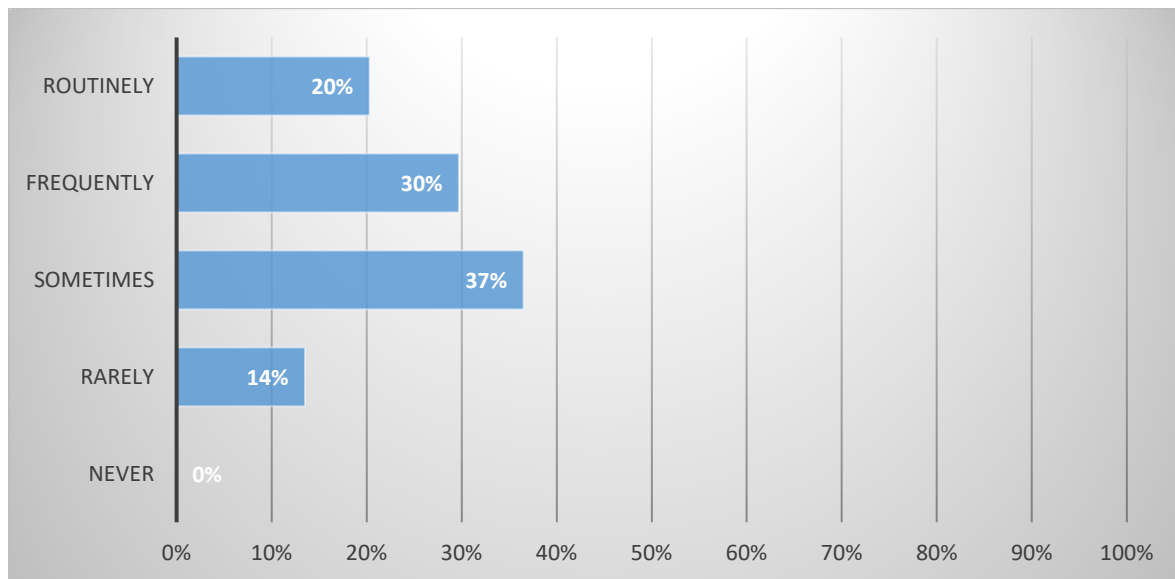
***Item 62a: How often do you perform a cardiopulmonary examination?***



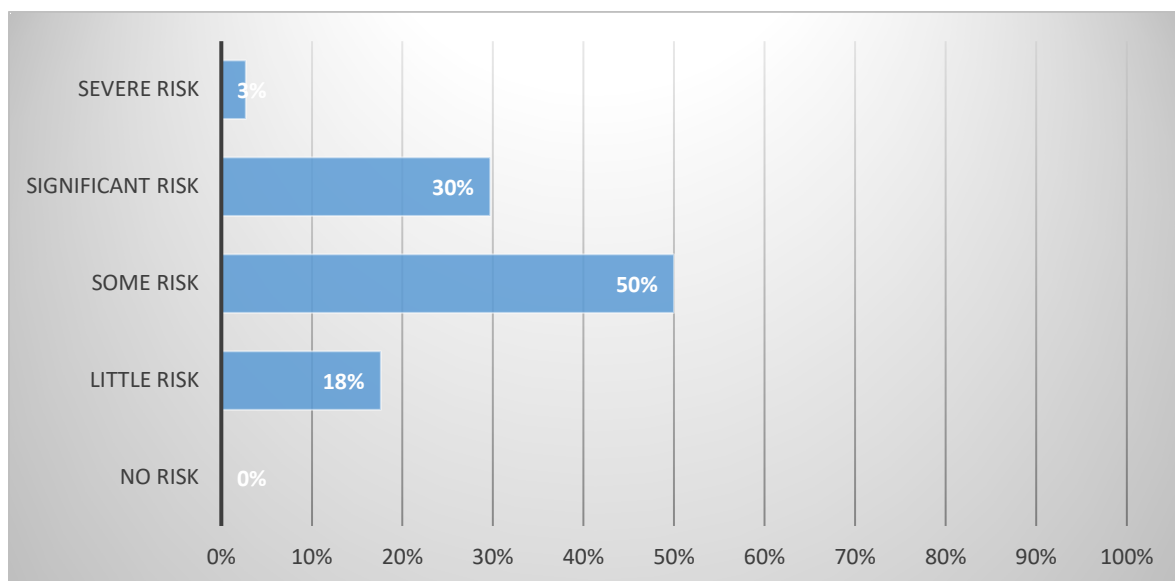
***Item 62b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



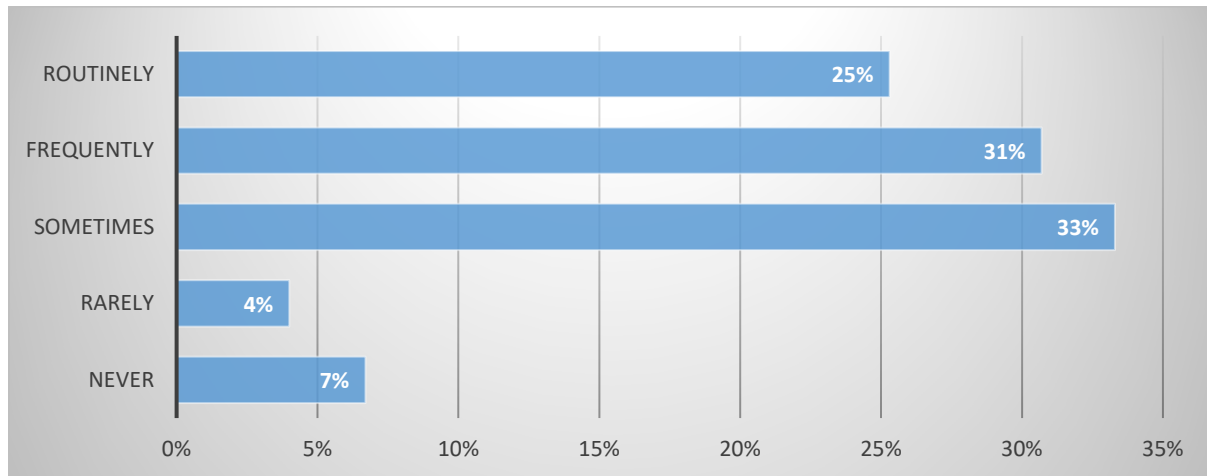
***Item 63a: How often do you perform an abdominal examination?***



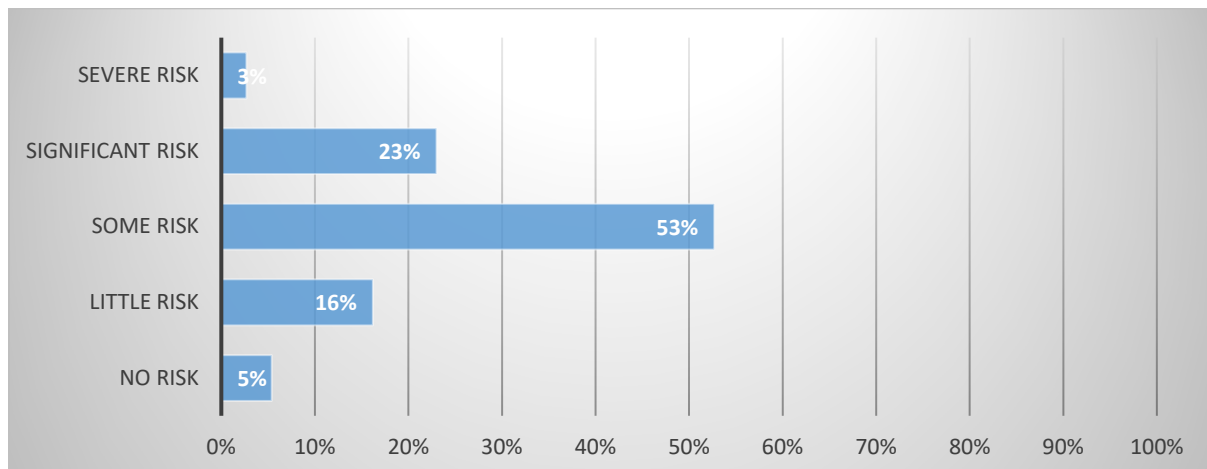
***Item 63b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 64a: How often do you perform a nutrition-focused orthopedic/neurologic examination?***

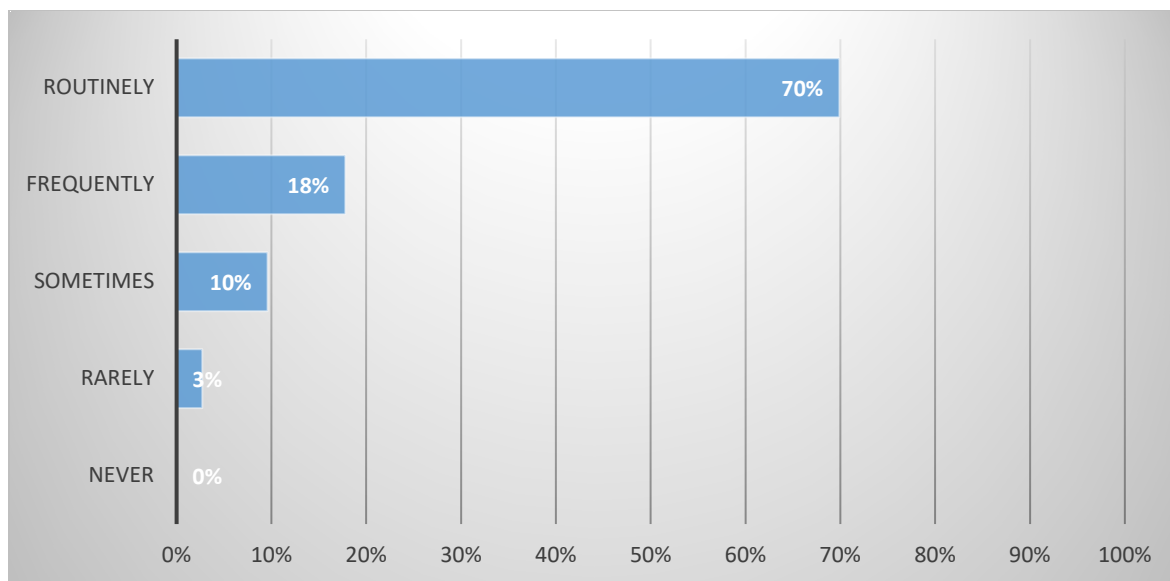


***Item 64b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

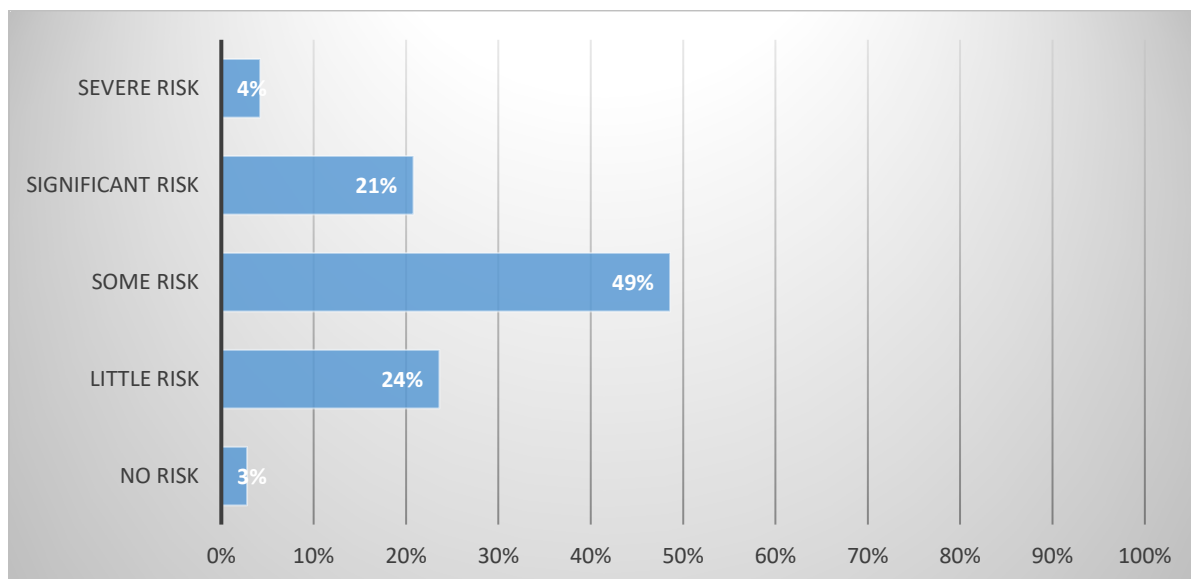




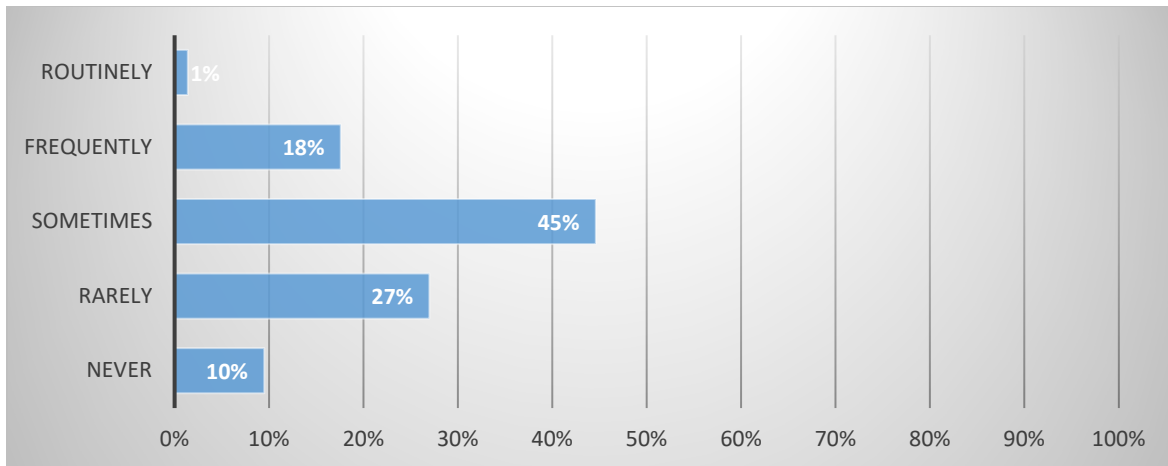
***Item 65a: How often do you obtain basic anthropometric measurements (height, weight, BMI)?***



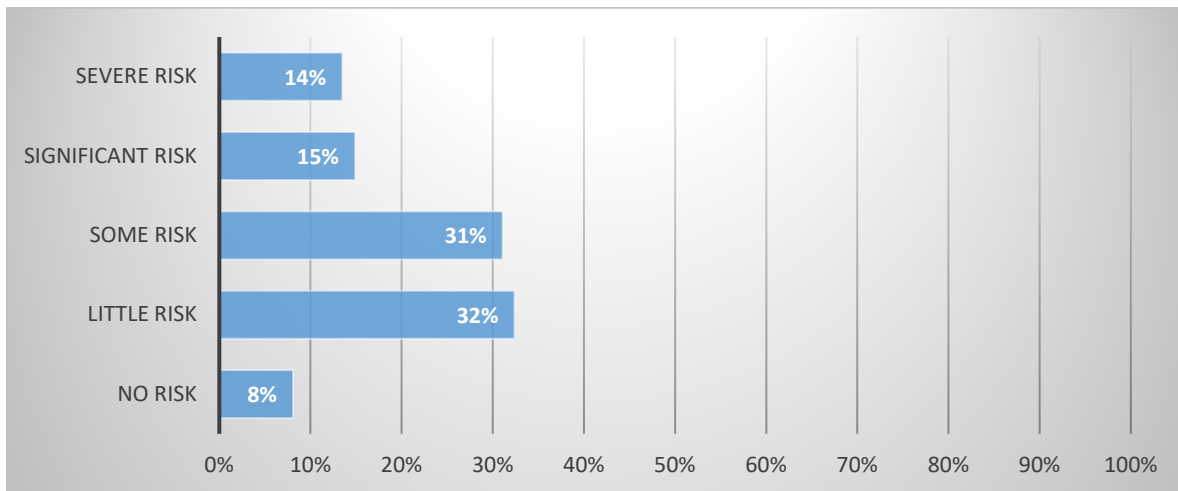
***Item 65b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



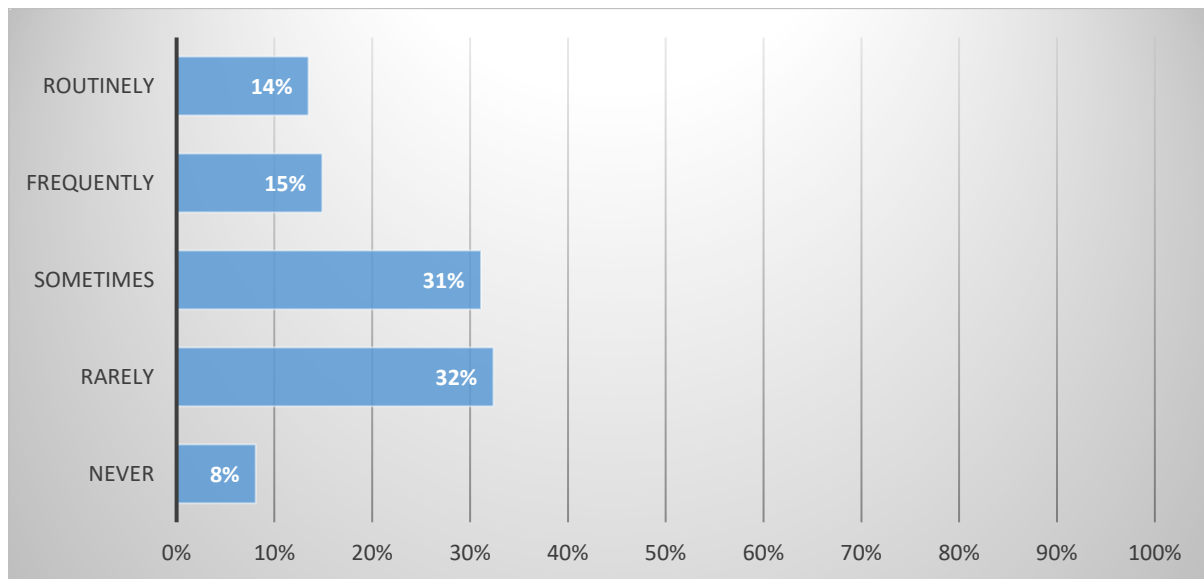
***Item 66a: How often do you obtain advanced anthropometric measurements (body composition, waist to hip circumference ratio, etc.)?***



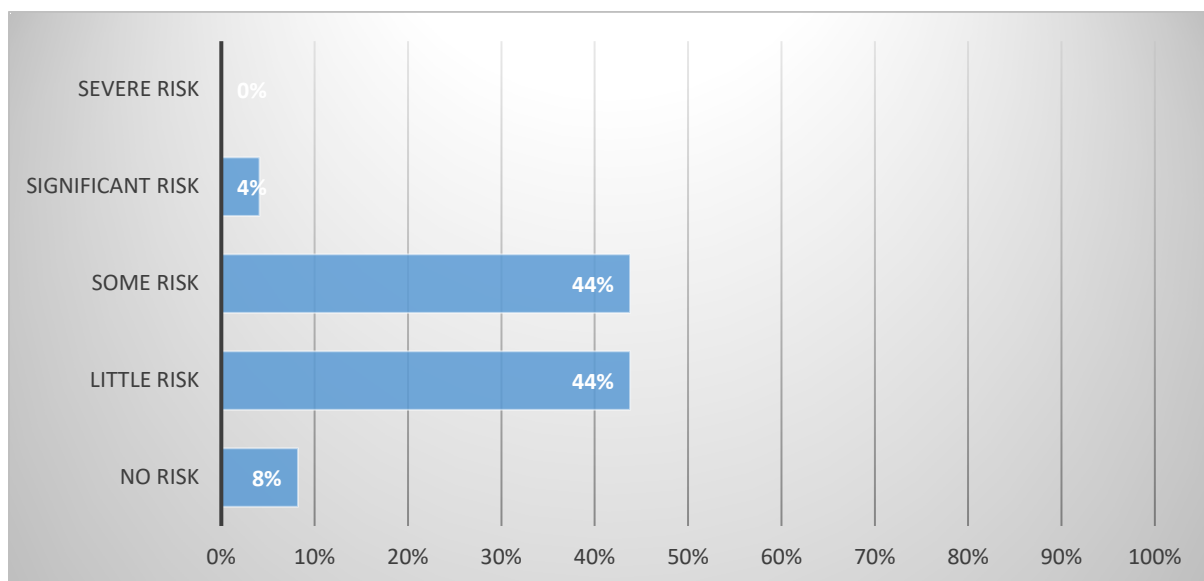
***Item 66b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



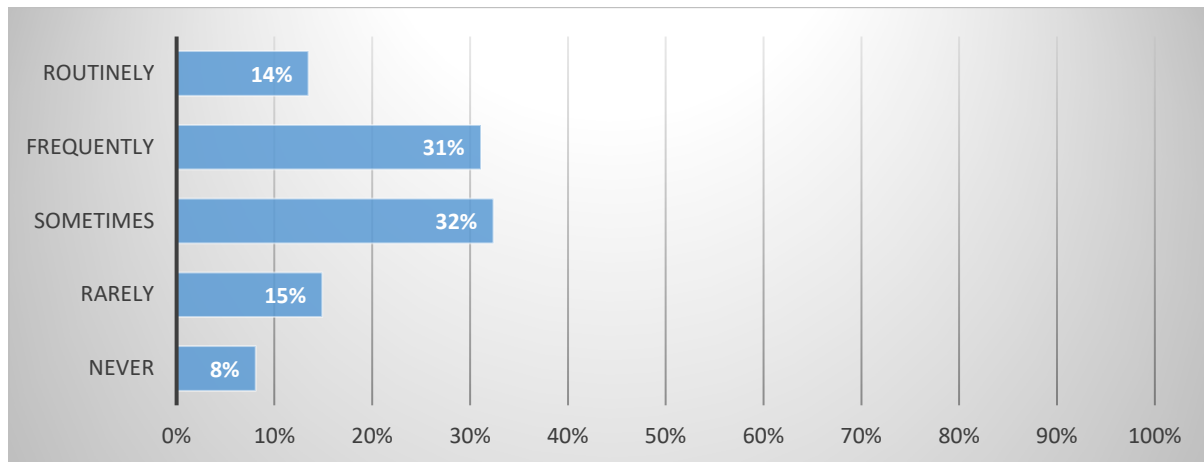
***Item 67a: How often do you obtain a basal temperature chart?***



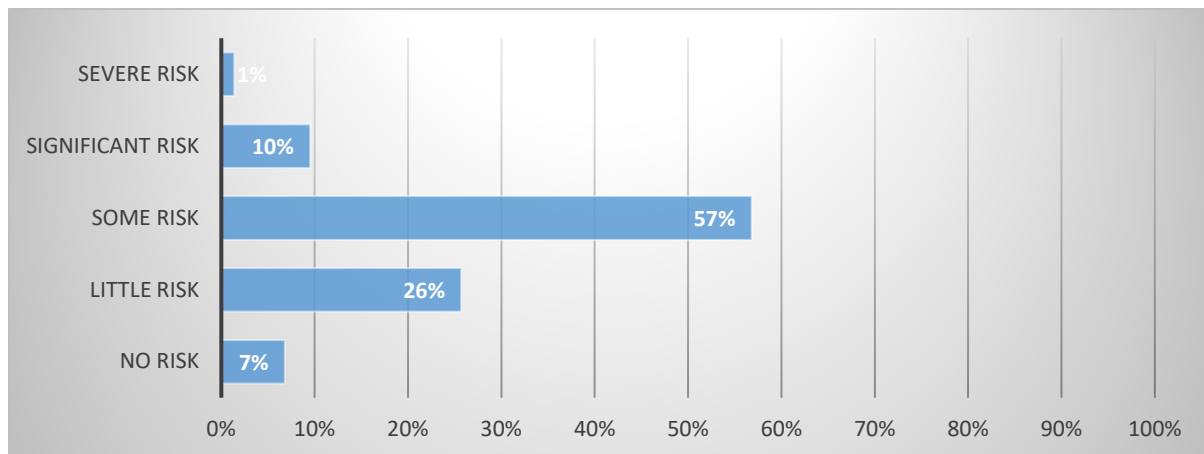
***Item 67b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



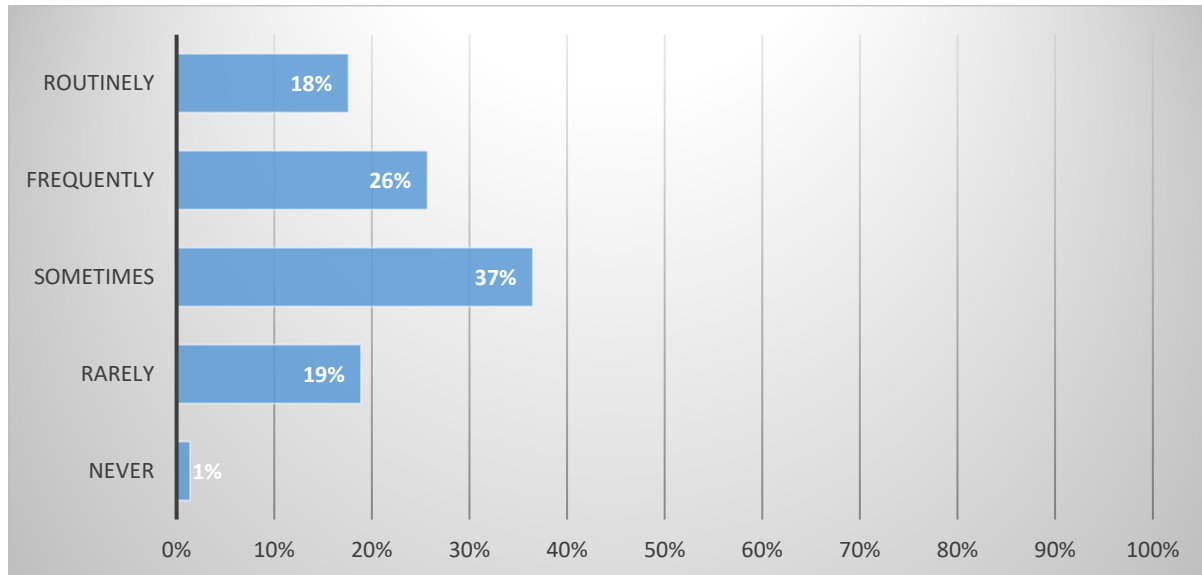
***Item 68a: How often do you perform nutrition specific examination procedures (Ragland's test, Rogoff, Lowenberg's, etc.)?***



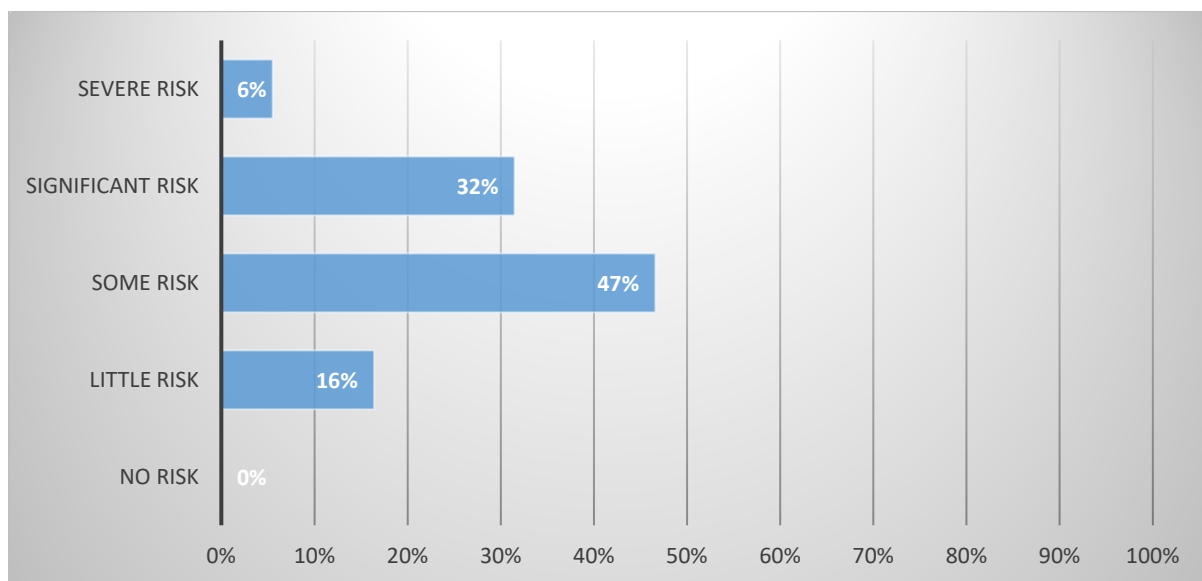
***Item 68b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



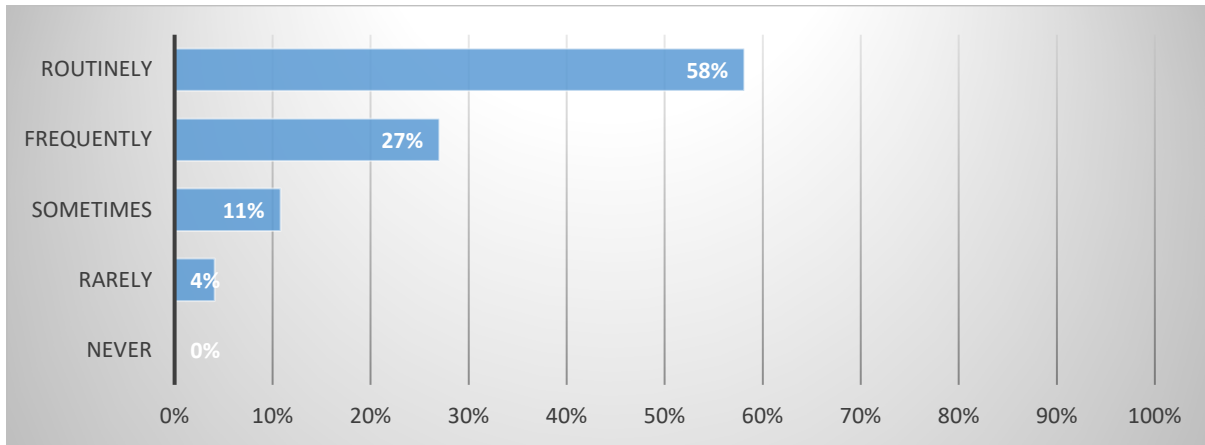
***Item 69a: How often do you obtain and interpret diagnostic imaging studies (e.g., bone density, x-ray, CT, etc. ) to evaluate for nutritional implications?***



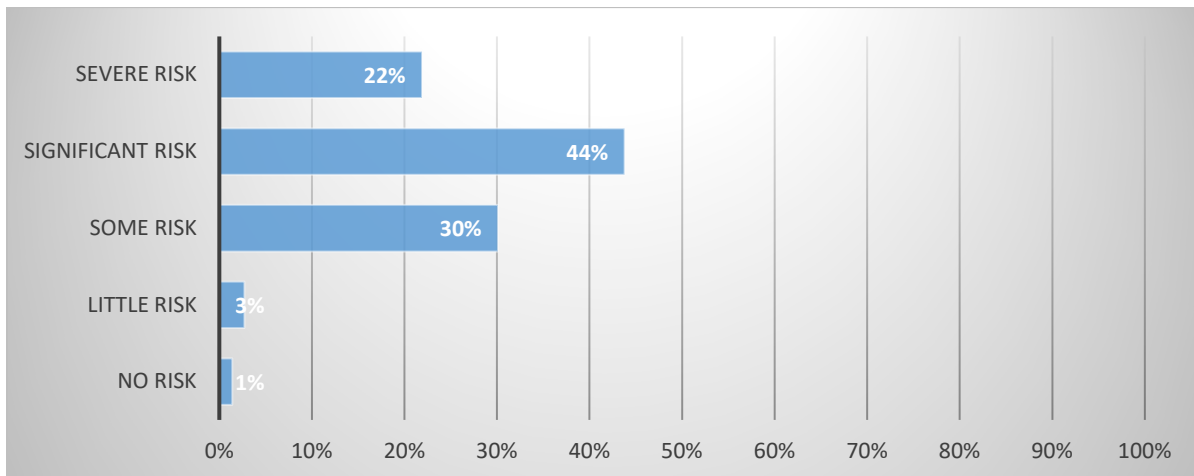
***Item 69b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



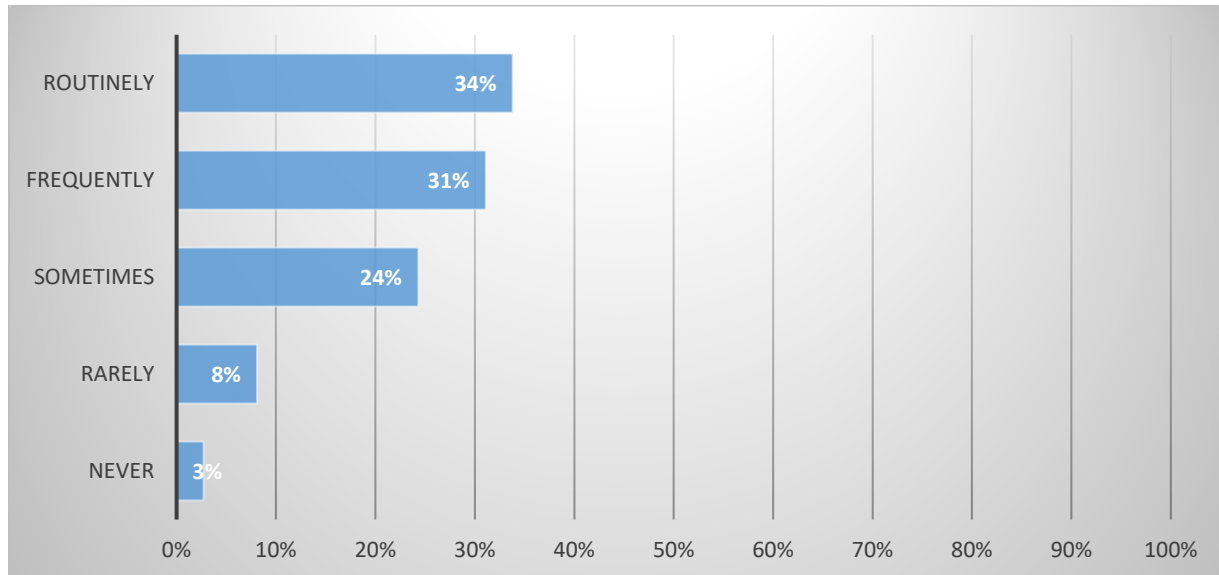
***Item 70a: How often do you obtain and interpret blood laboratory test results for nutritional implications?***



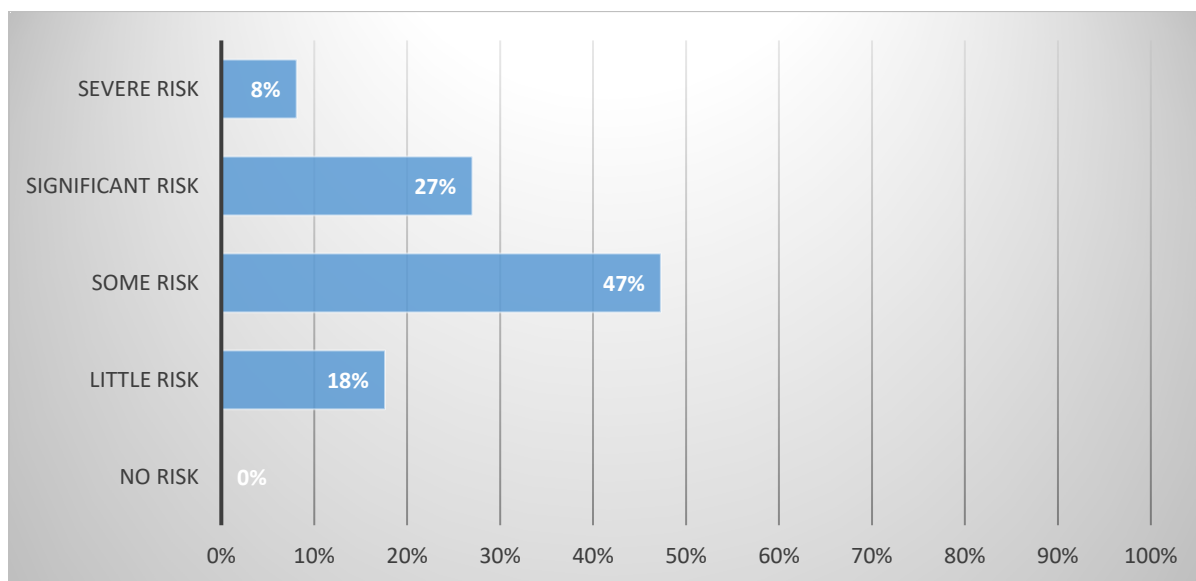
***Item 70b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



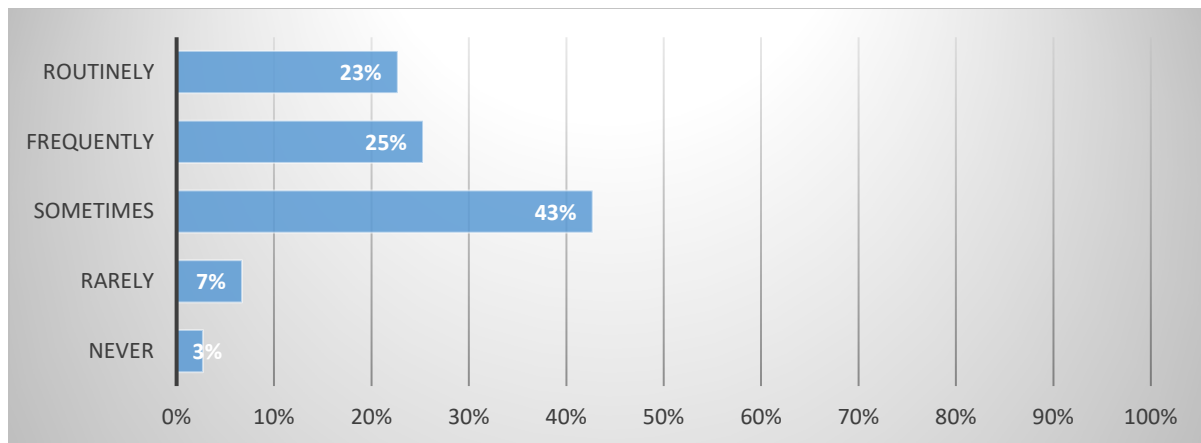
***Item 71a: How often do you obtain and interpret urine laboratory test results for nutritional implications?***



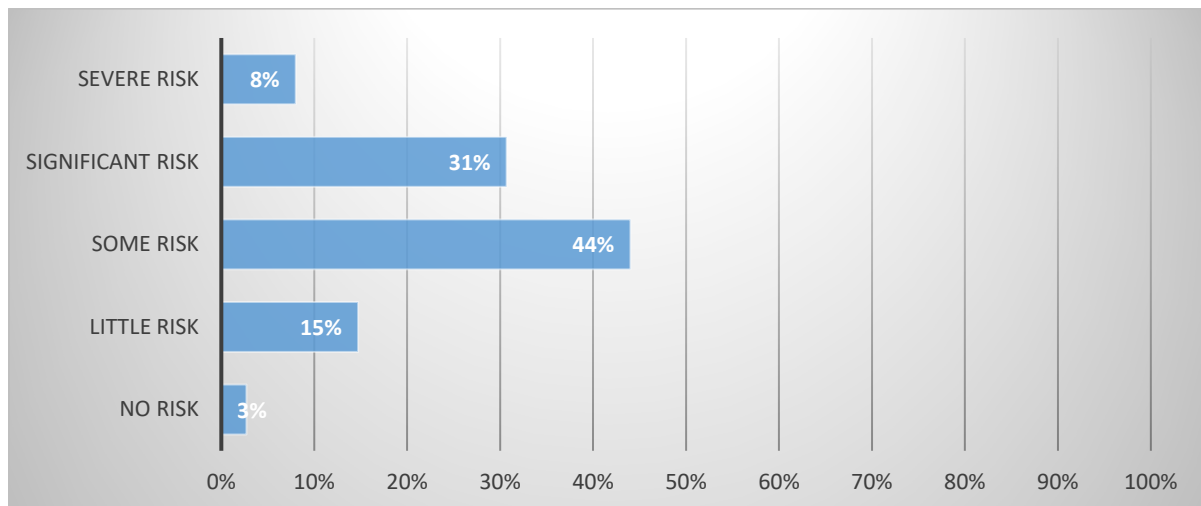
***Item 71b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 72a: How often do you obtain and interpret hair, saliva, feces, or other laboratory test results for nutritional implications?***

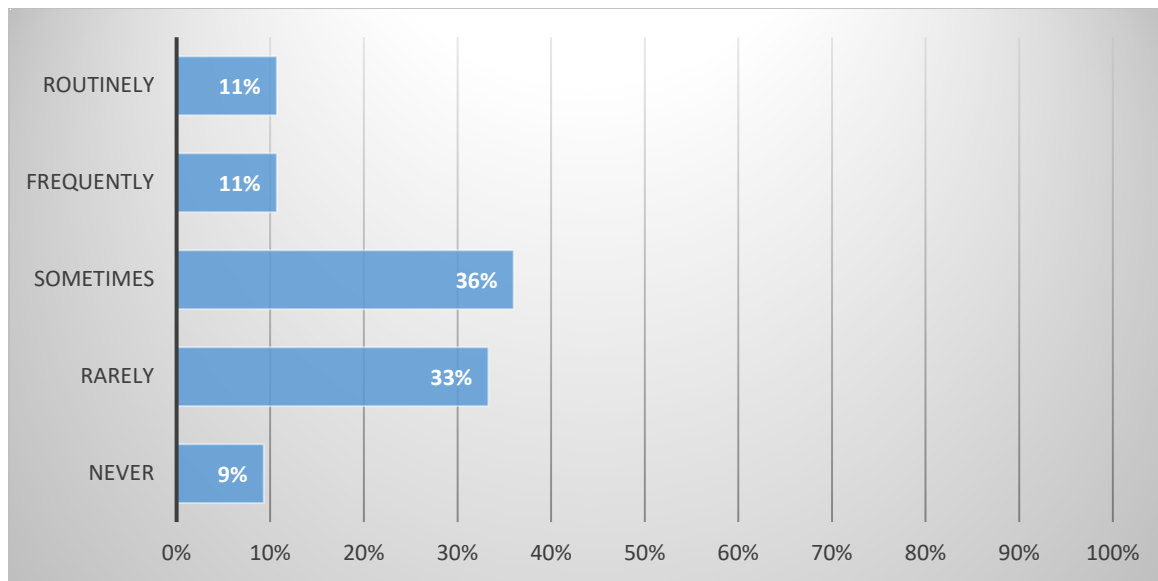


***Item 72b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

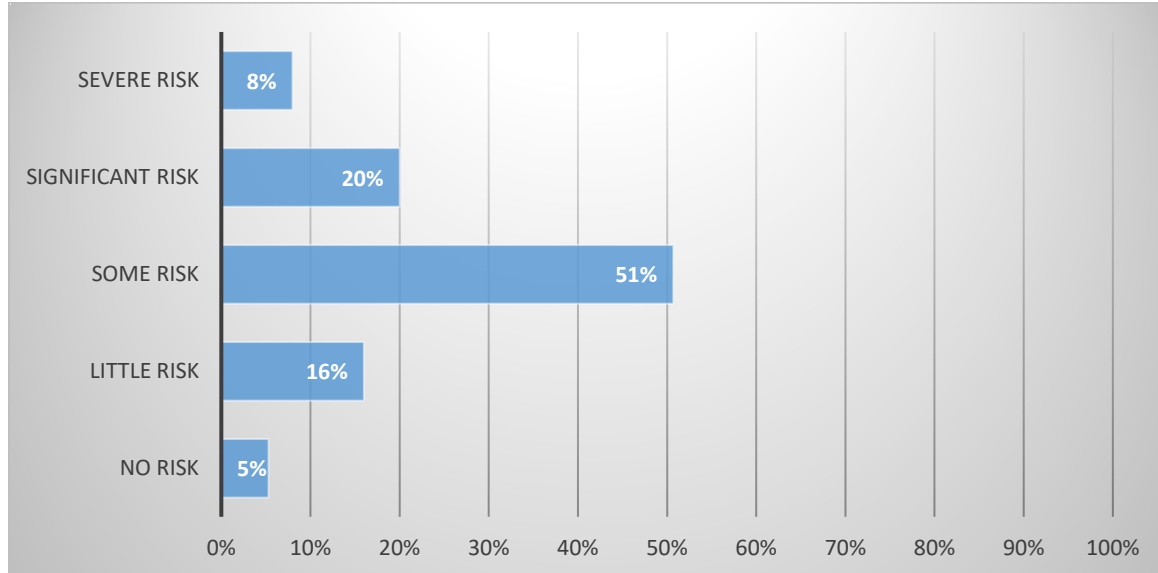




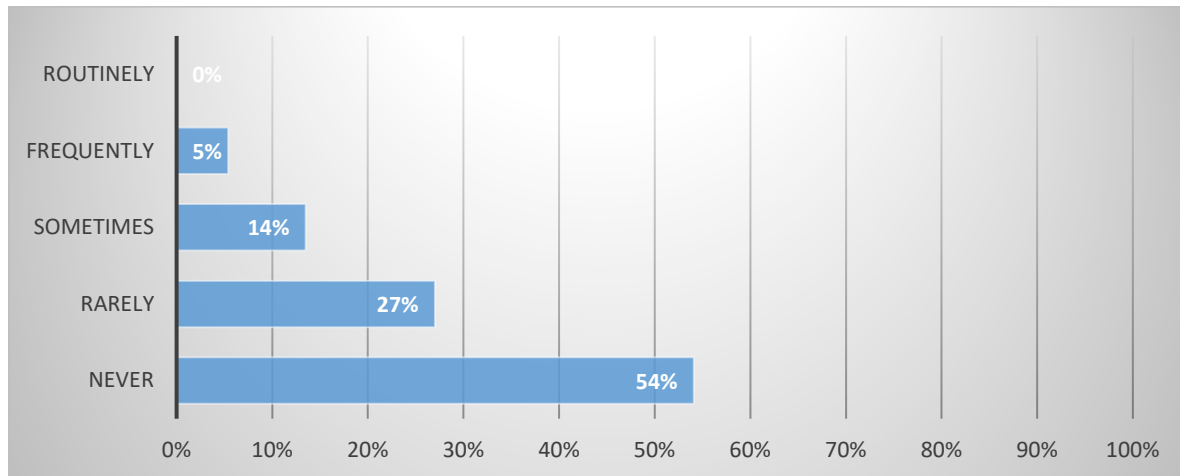
***Item 73a: How often do you obtain and interpret other specialized studies (e . g. , EKG, ultrasound, etc.) for nutritional implications?***



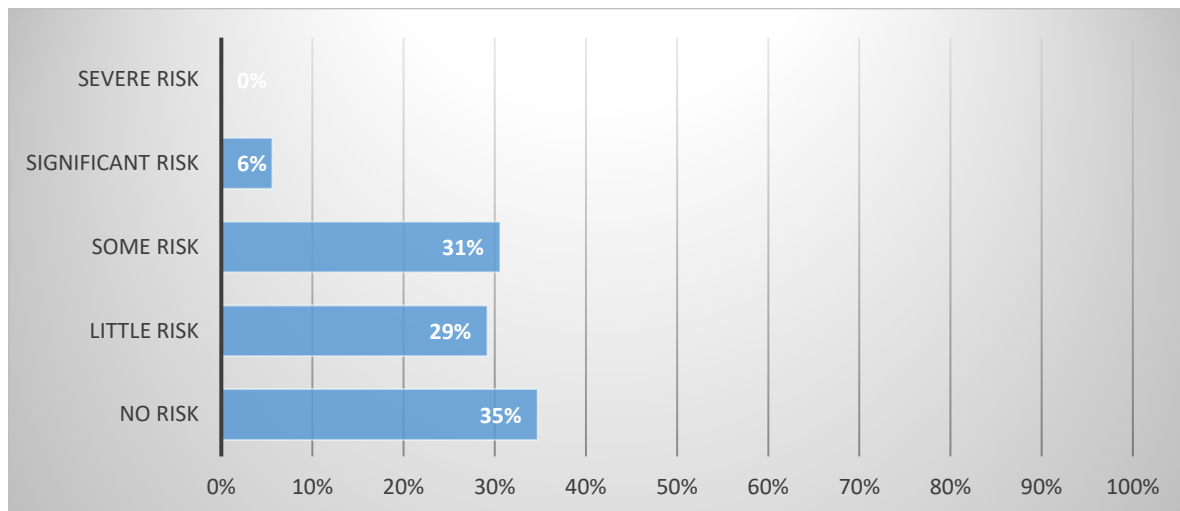
***Item 73b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



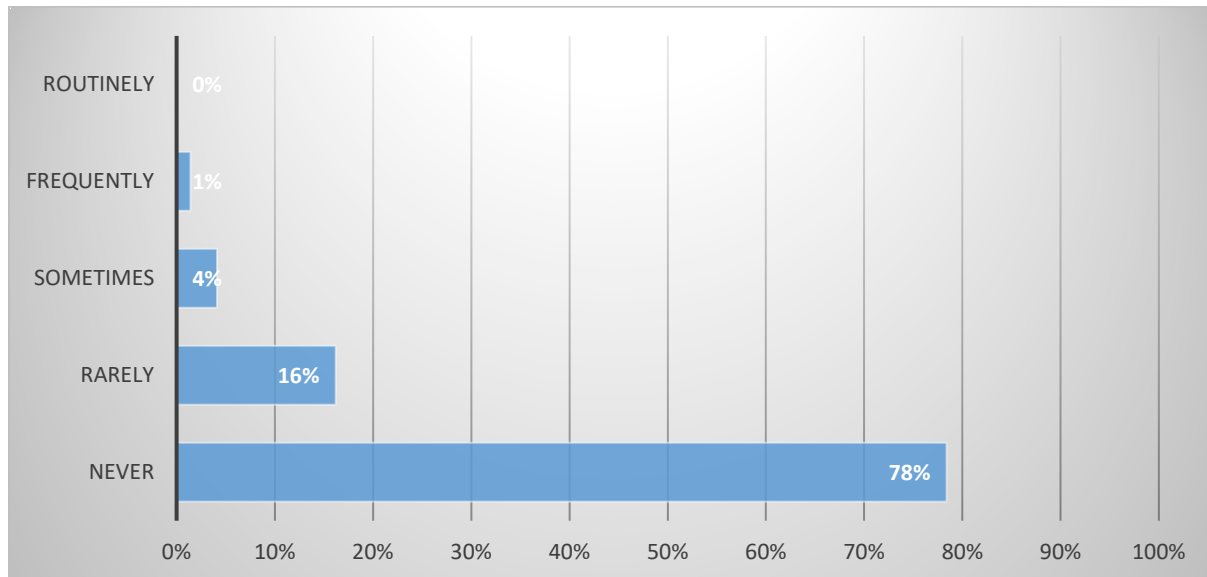
***Item 74a: How often do you obtain and interpret electrodermal analysis?***



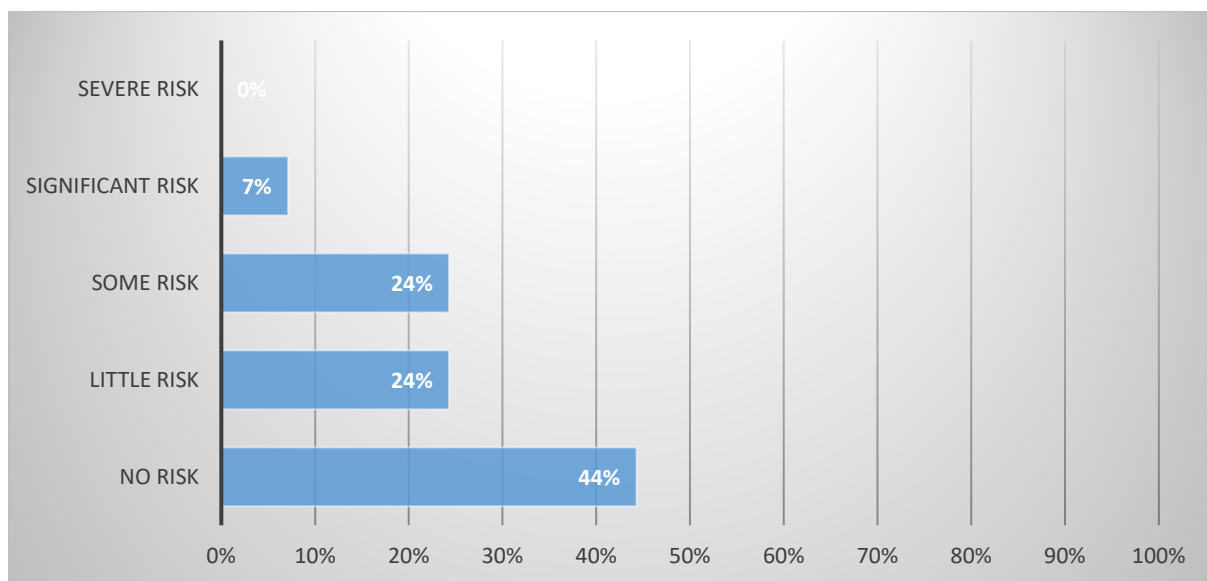
***Item 74b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



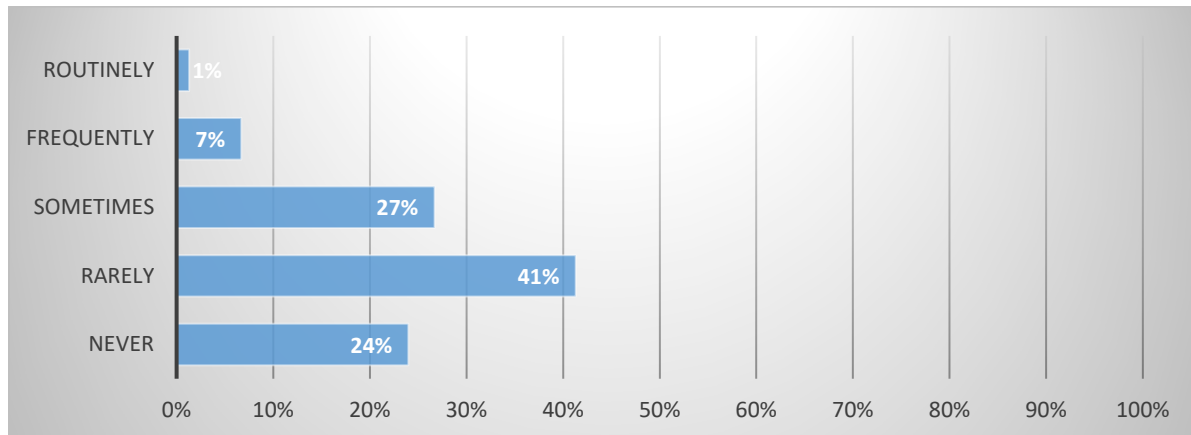
***Item 75a: How often do you obtain and interpret live cell analysis with darkfield microscopy?***



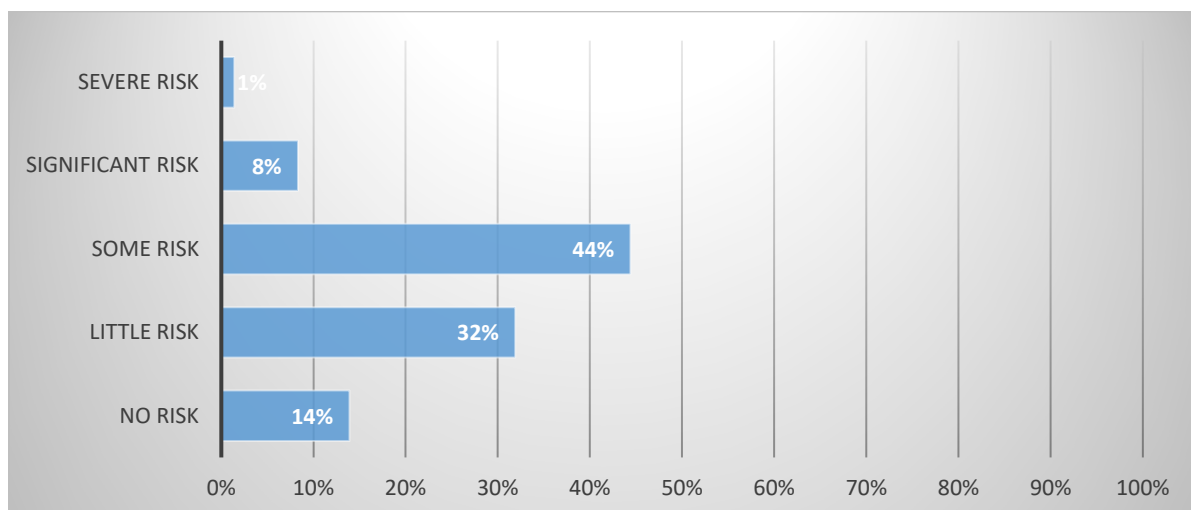
***Item 75b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



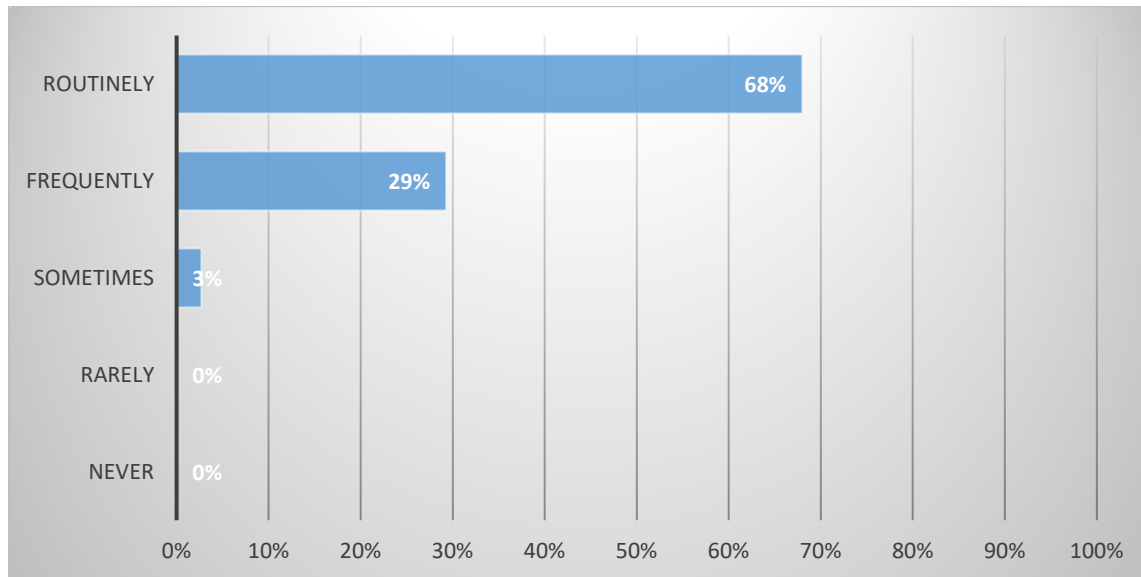
***Item 76a: How often do you obtain genetic testing?***



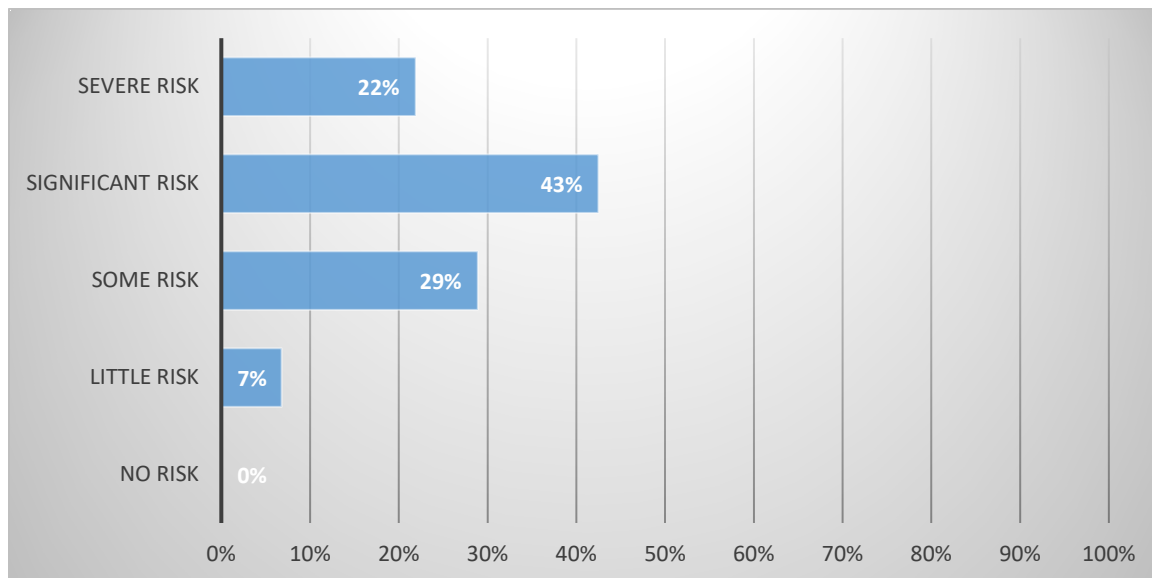
***Item 76b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



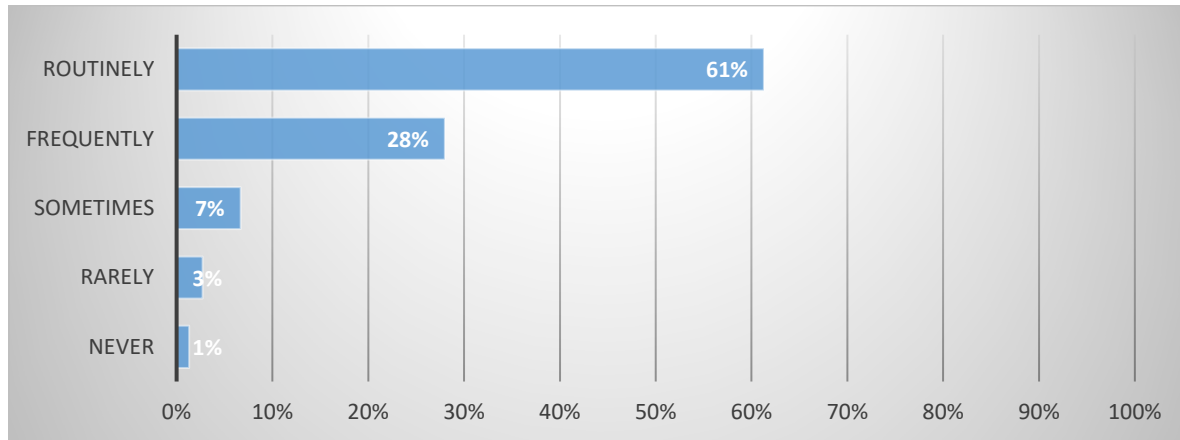
***Item 77a: How often do you develop a differential diagnosis or clinical impression?***



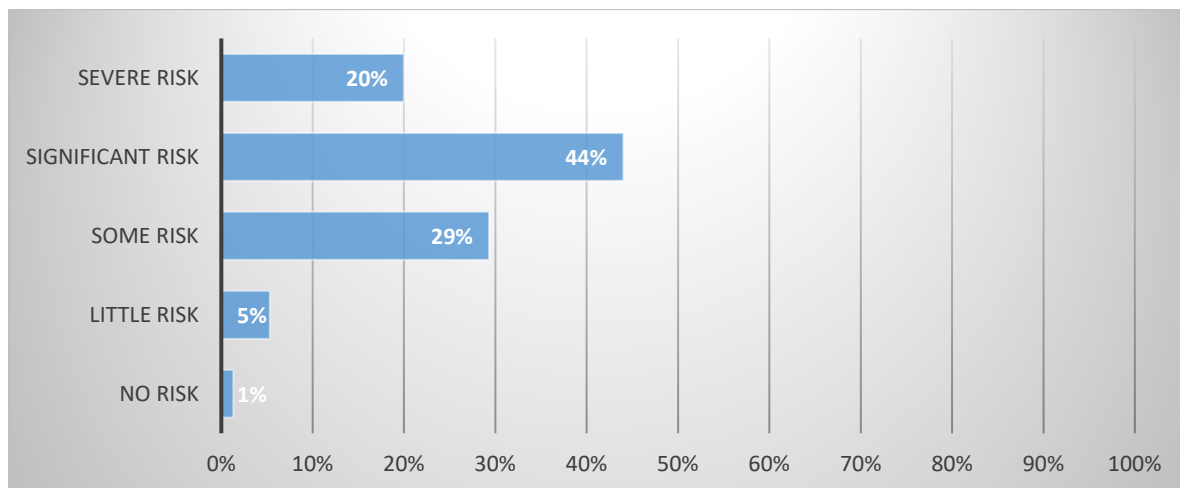
***Item 77b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



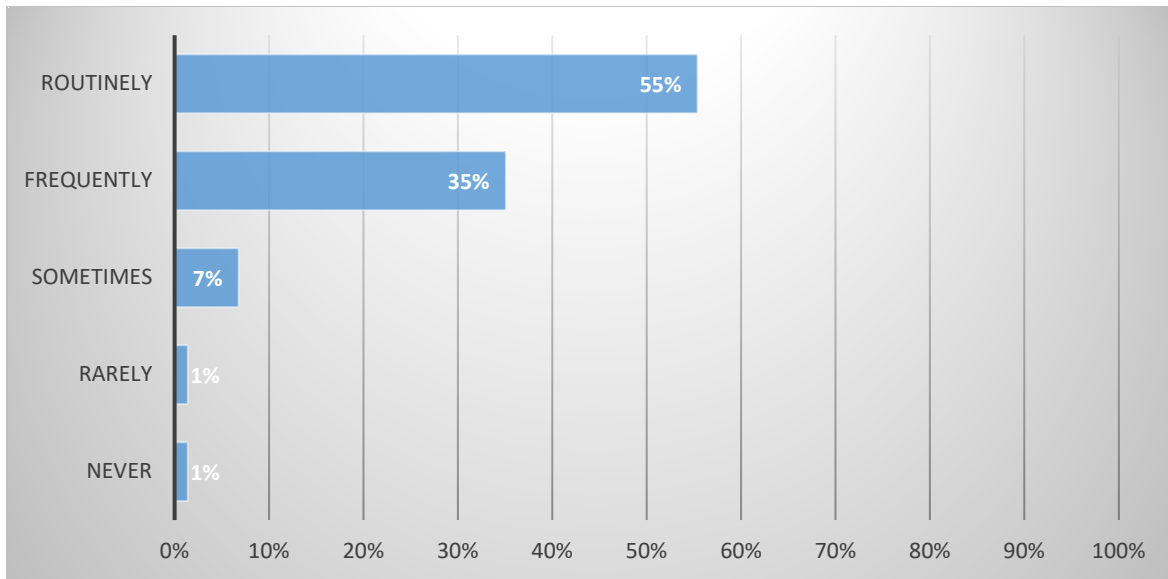
***Item 78a: How often do you review possible interactions of nutrients, foods, drugs, and herbs associated with a patient's care?***



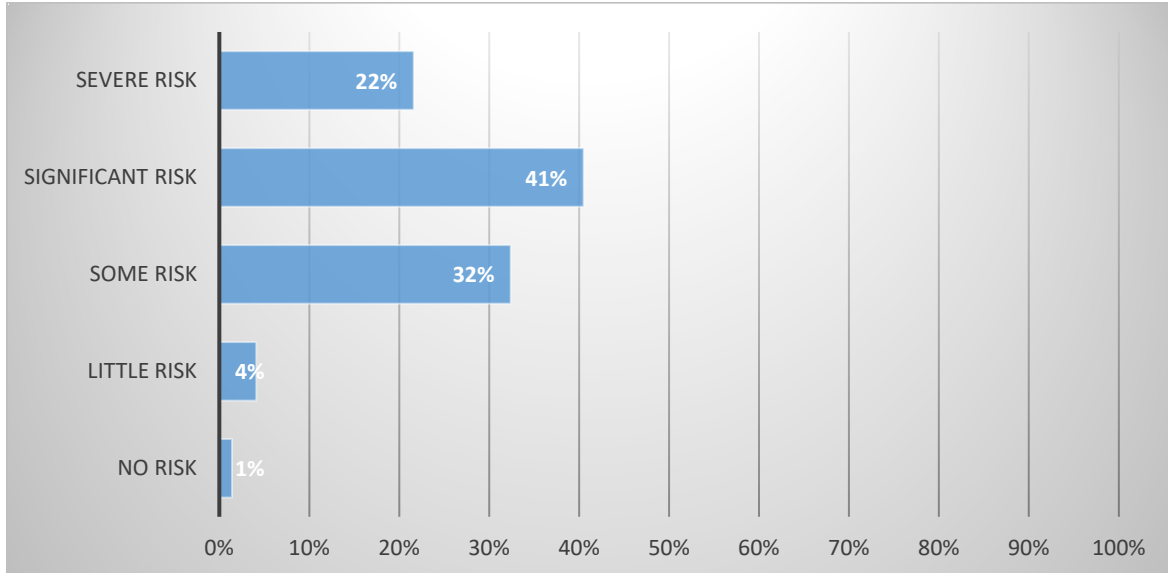
***Item 78b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



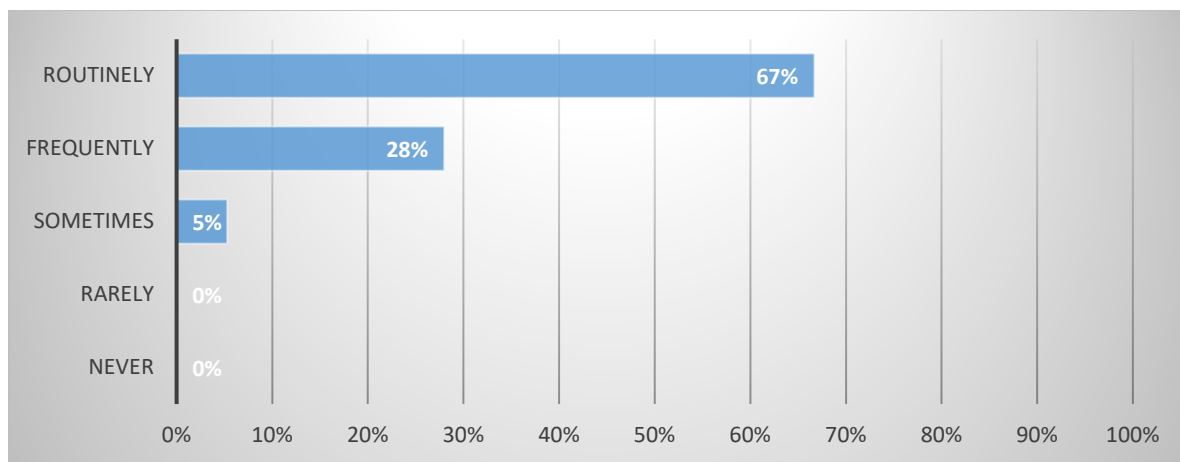
***Item 79a: How often do you assess the existence of risk factors and contraindications to nutritional intervention?***



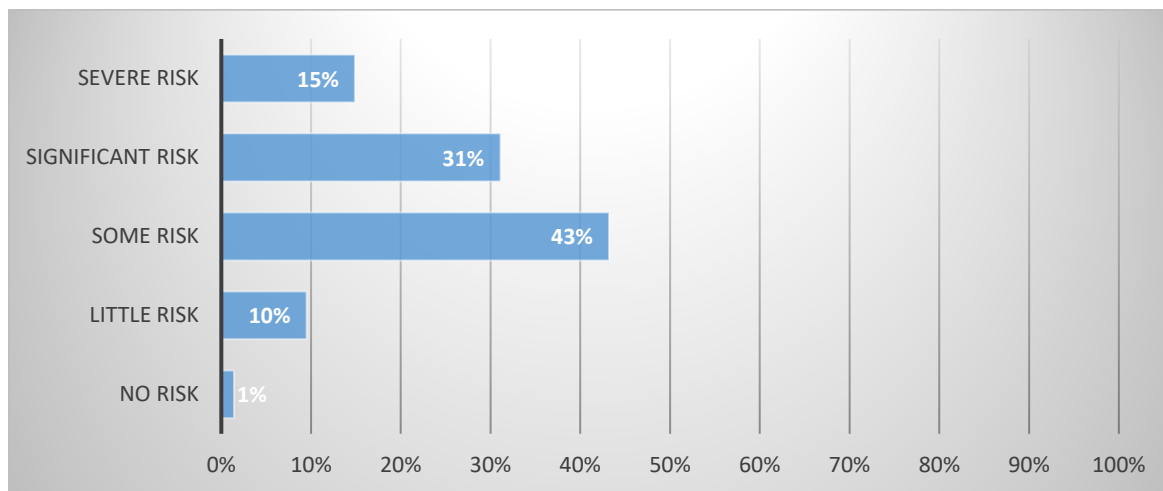
***Item 79b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 80a: How often do you develop a case management plan that includes nutritional and lifestyle changes?***

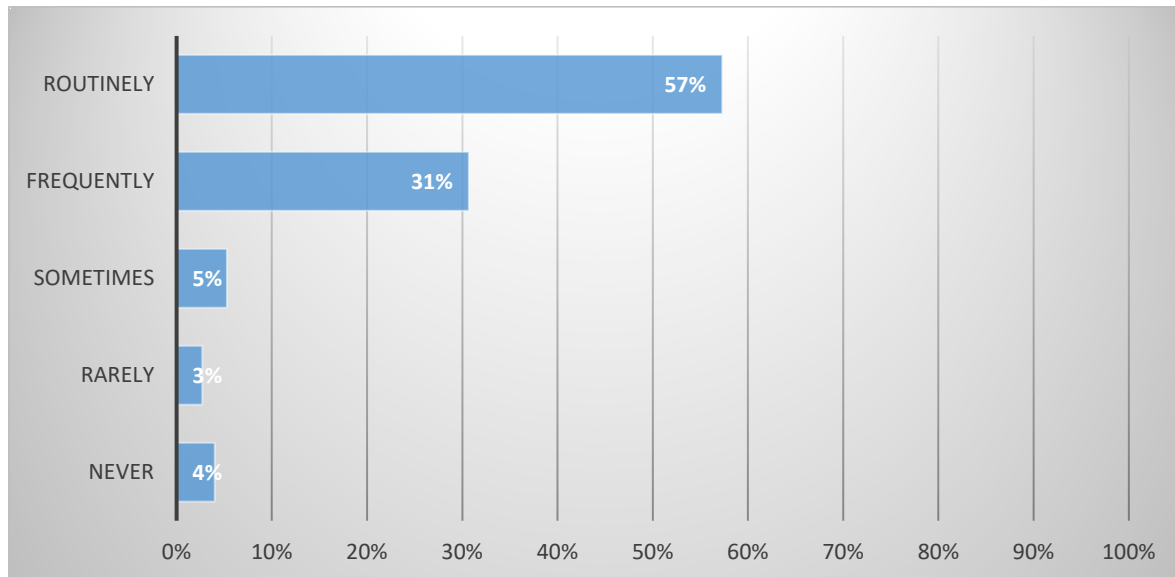


***Item 80b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

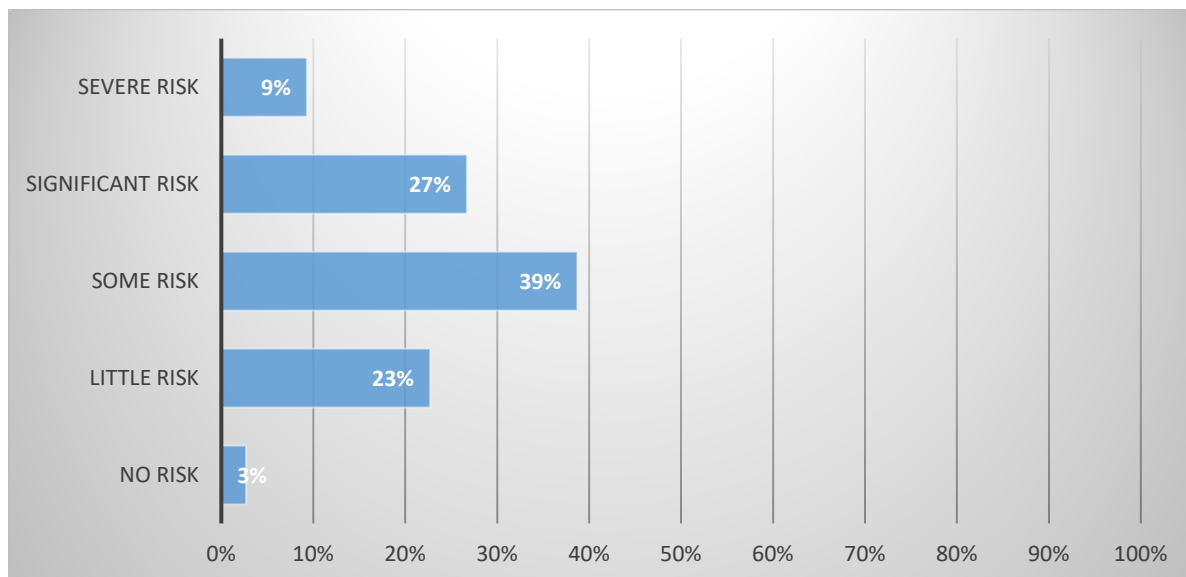




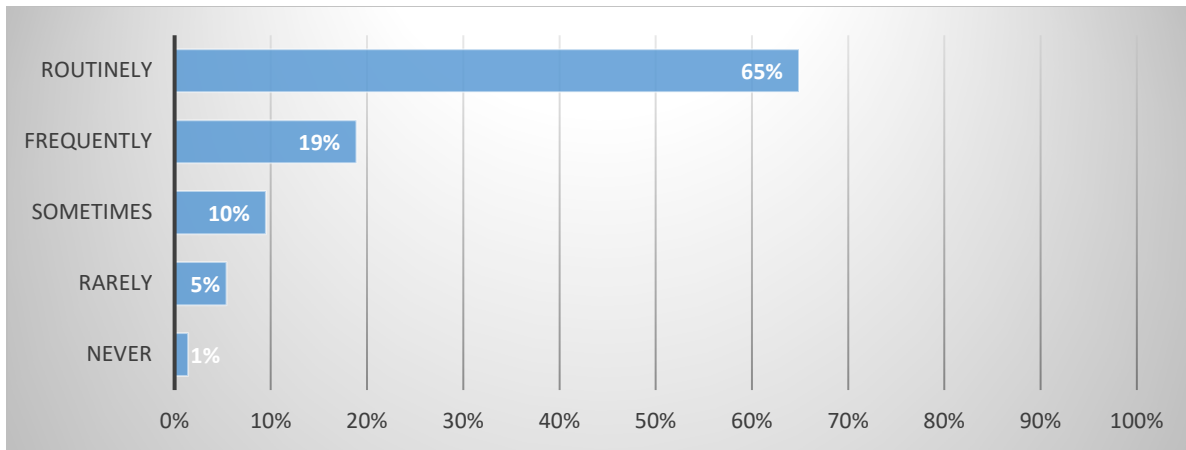
***Item 81a: How often do you develop a prognosis?***



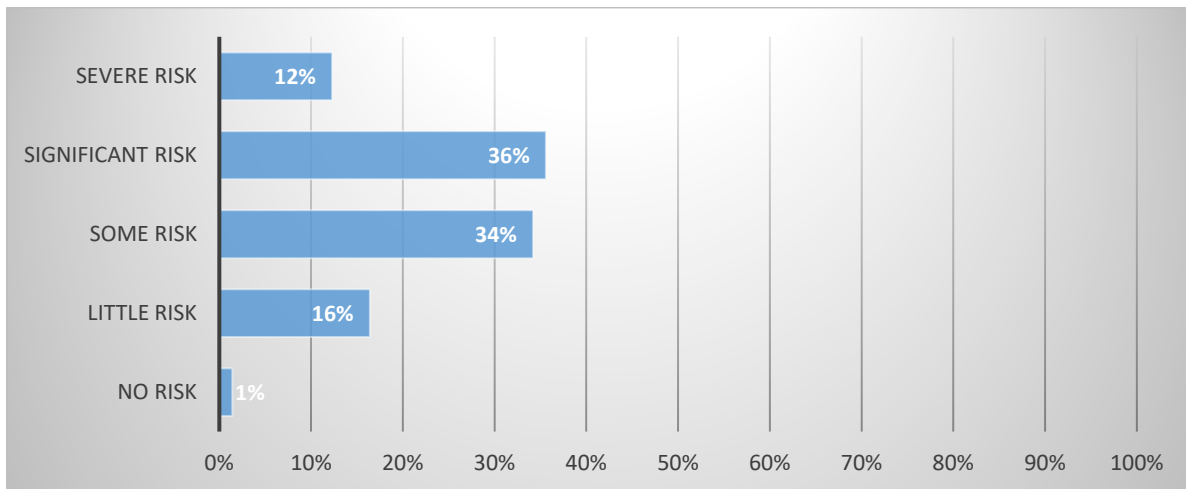
***Item 81b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



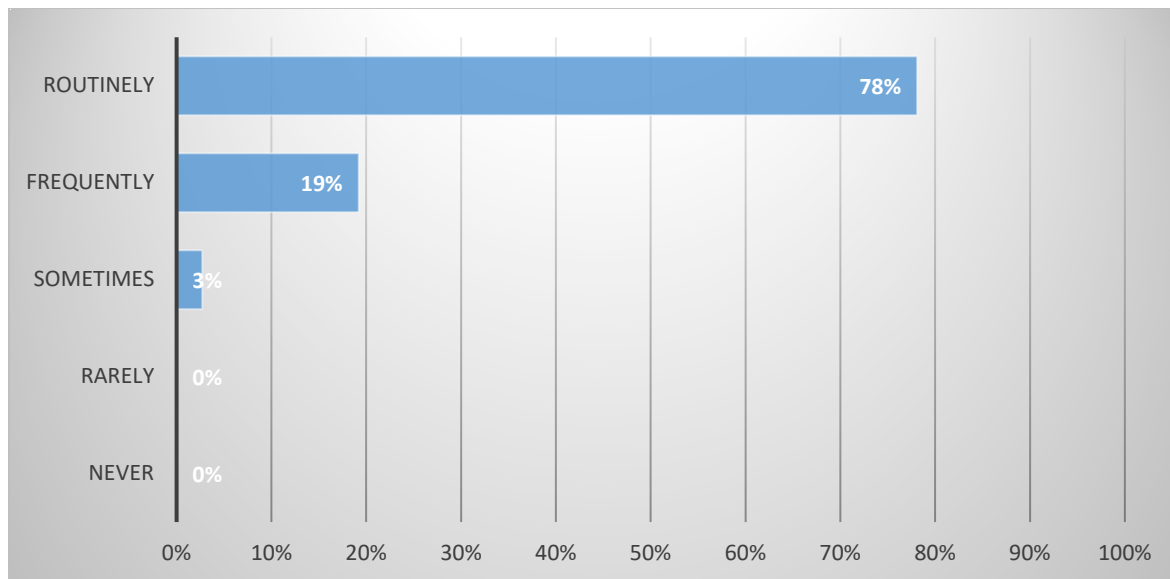
***Item 82a: How often do you create complete, legible documentation of a patient's disease history and examination findings as well as diagnosis prognosis, and treatment plan?***



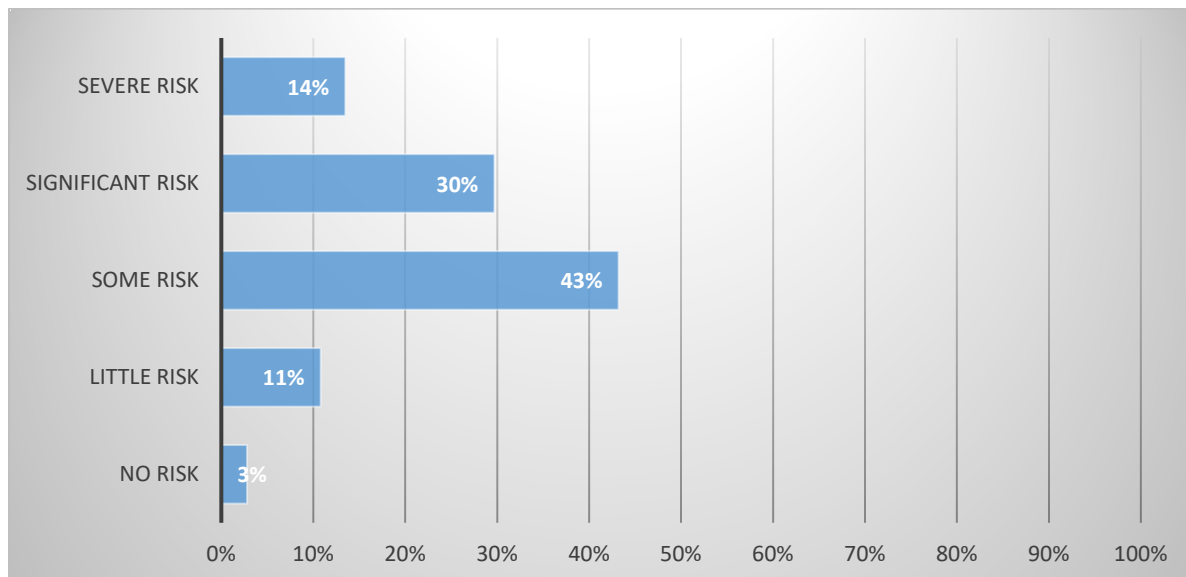
***Item 82b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



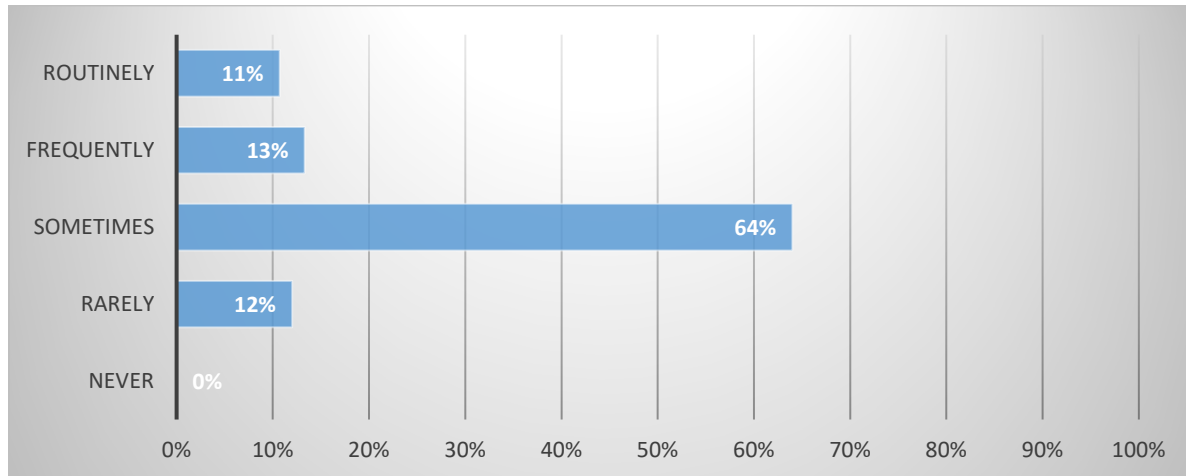
***Item 83a: How often do you review with a patient his or her relevant history, examination findings, diagnosis, prognosis, and case management plan options?***



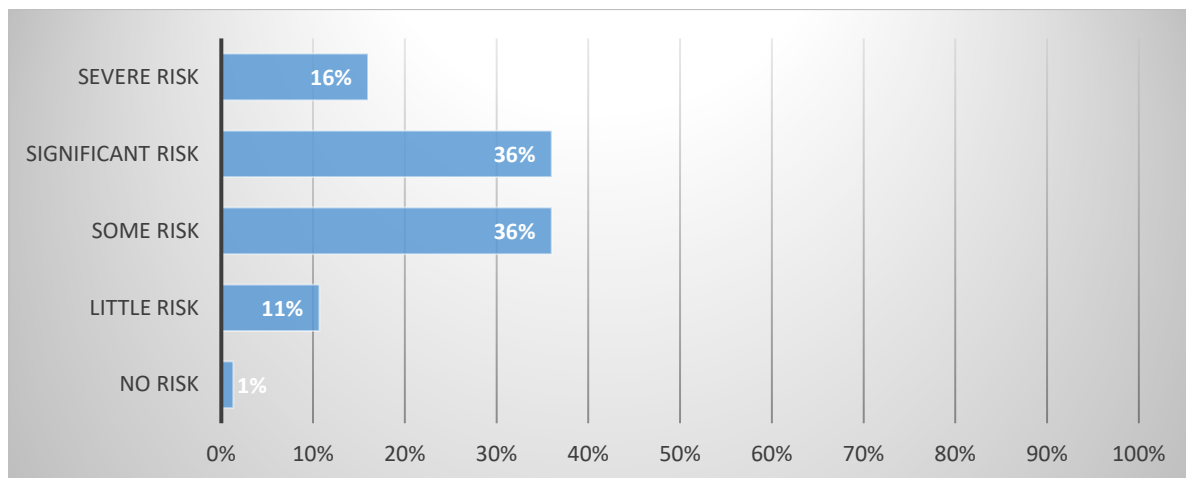
***Item 83b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



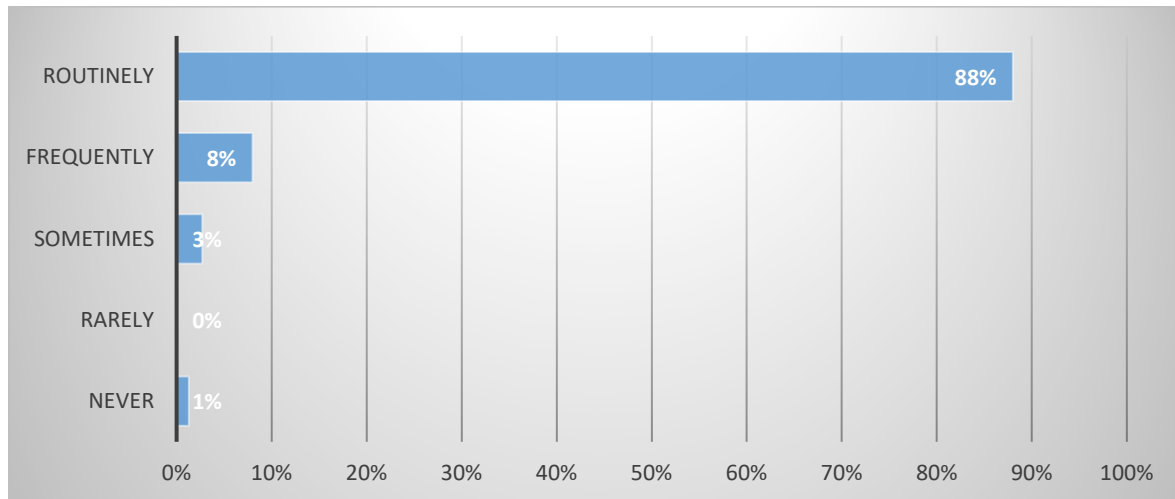
***Item 84a: How often do you refer a patient to a specialist for consultation or co-management?***



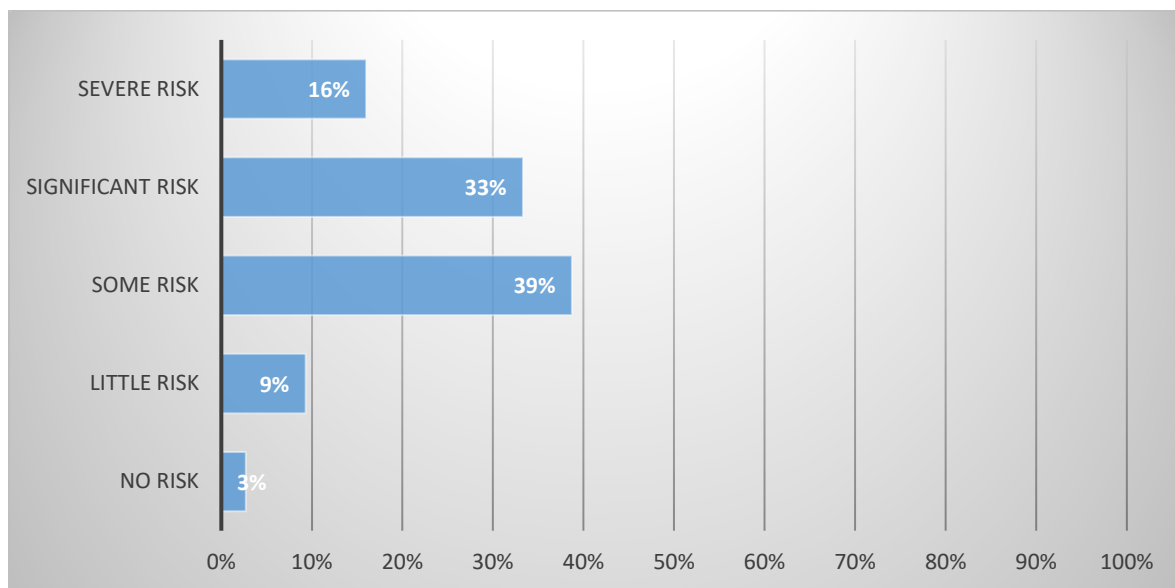
***Item 84b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



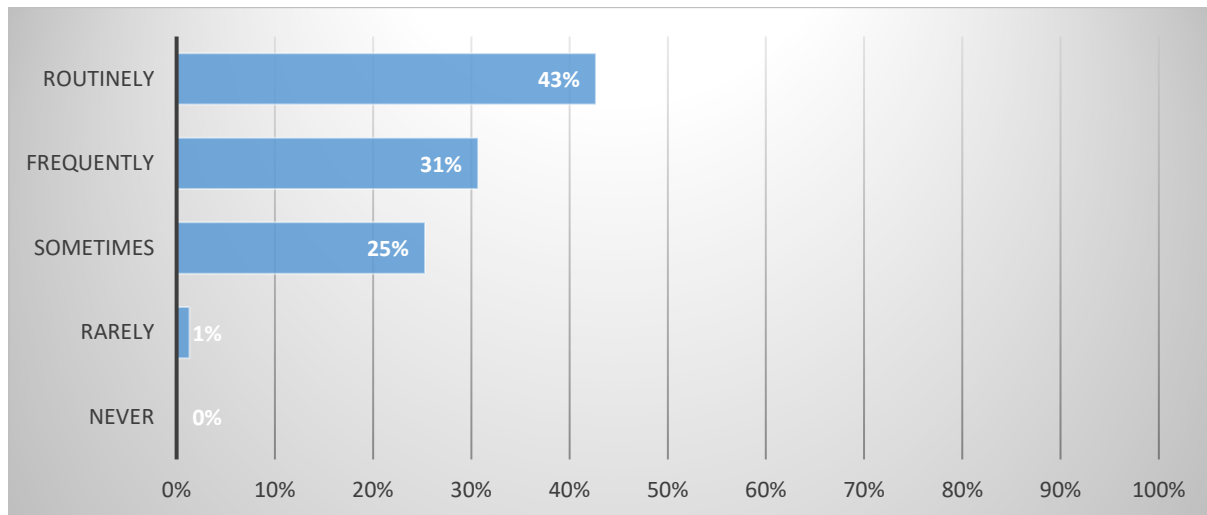
***Item 85a: How often do you legibly document each patient contact?***



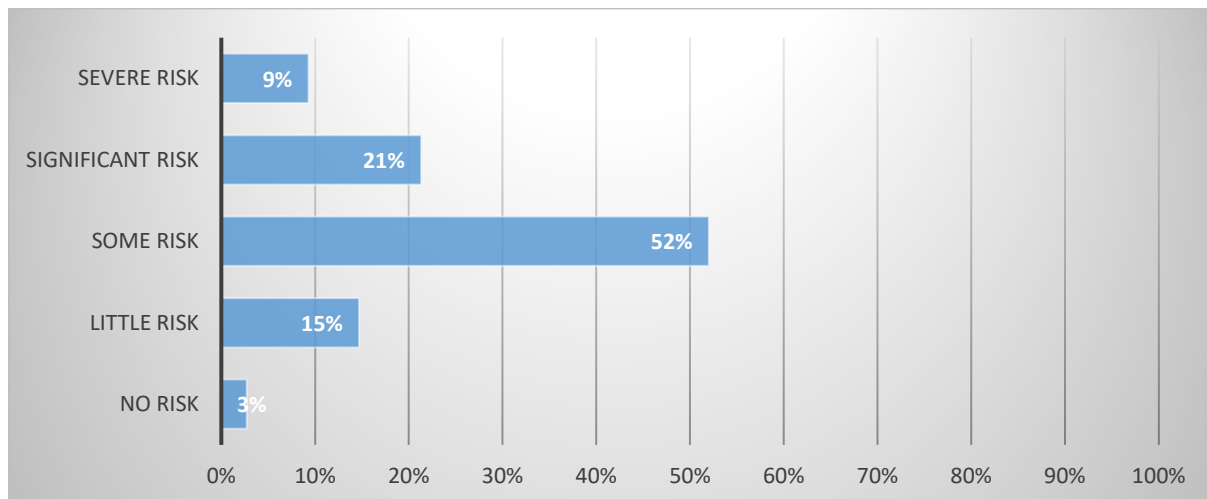
***Item 85b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



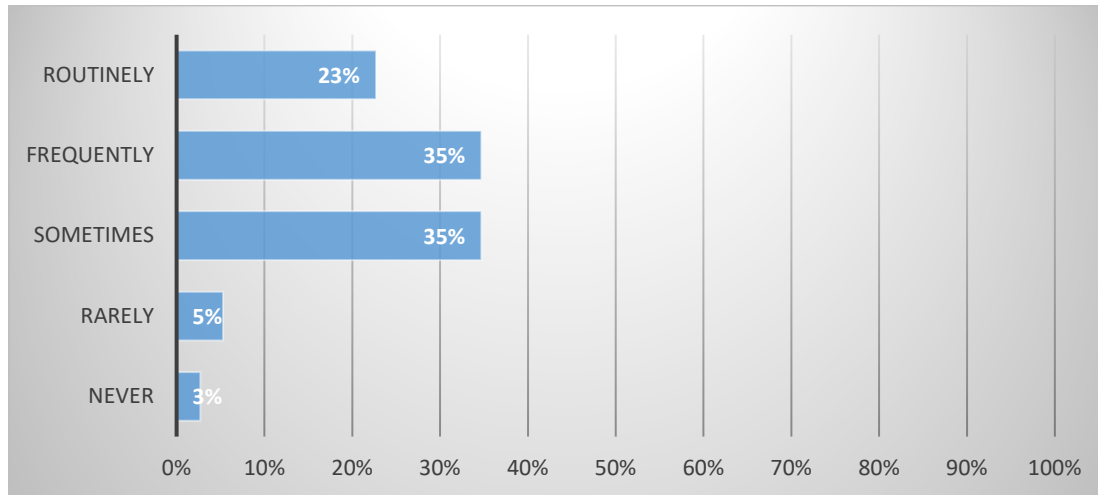
***Item 86a: How often do you monitor a patient's progress or response to treatment utilizing objective outcome measures (e.g., questionnaires, etc.)?***



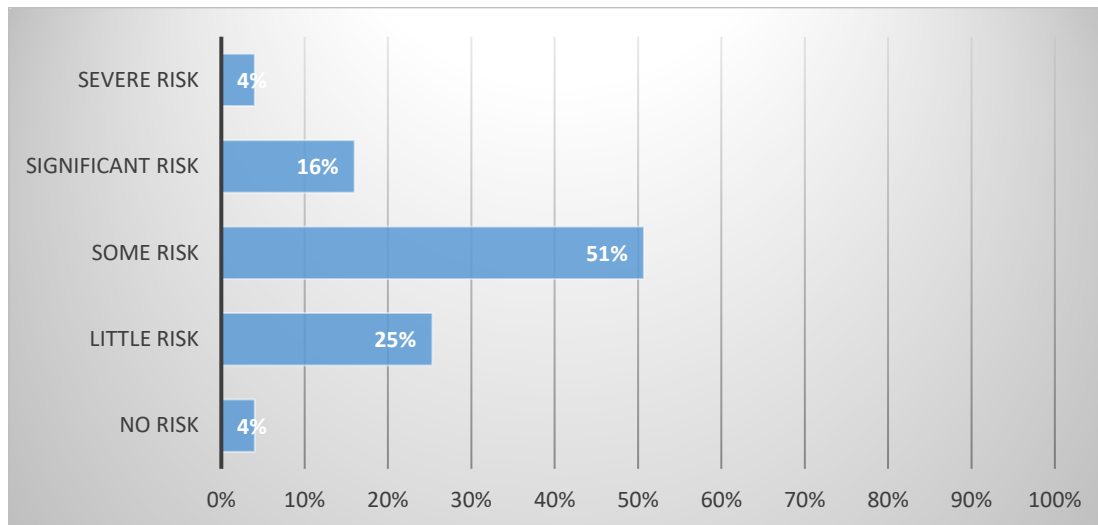
***Item 86b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



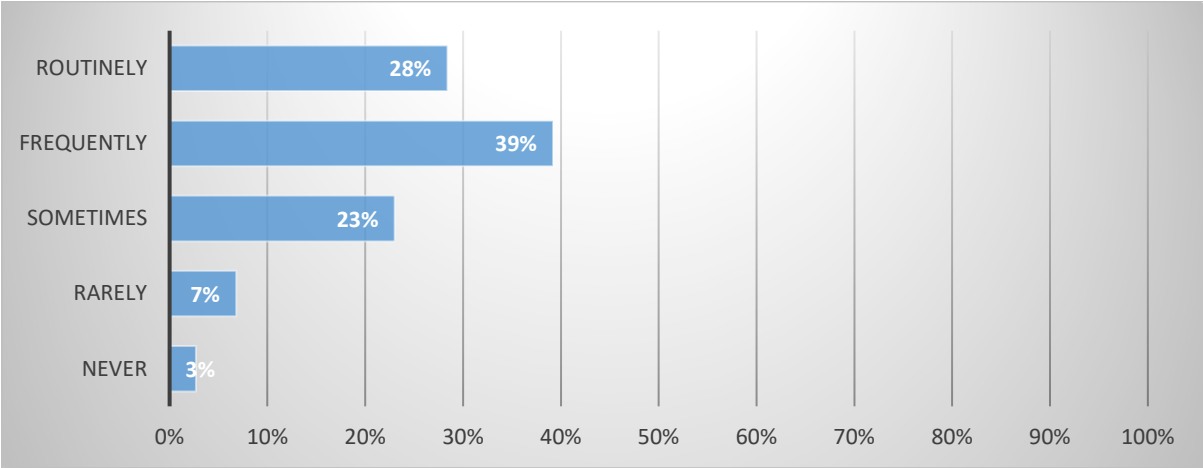
***Item 87a: How often do you monitor a patient's progress or response to treatment by documenting physical changes in hair, skin, nails, etc.?***



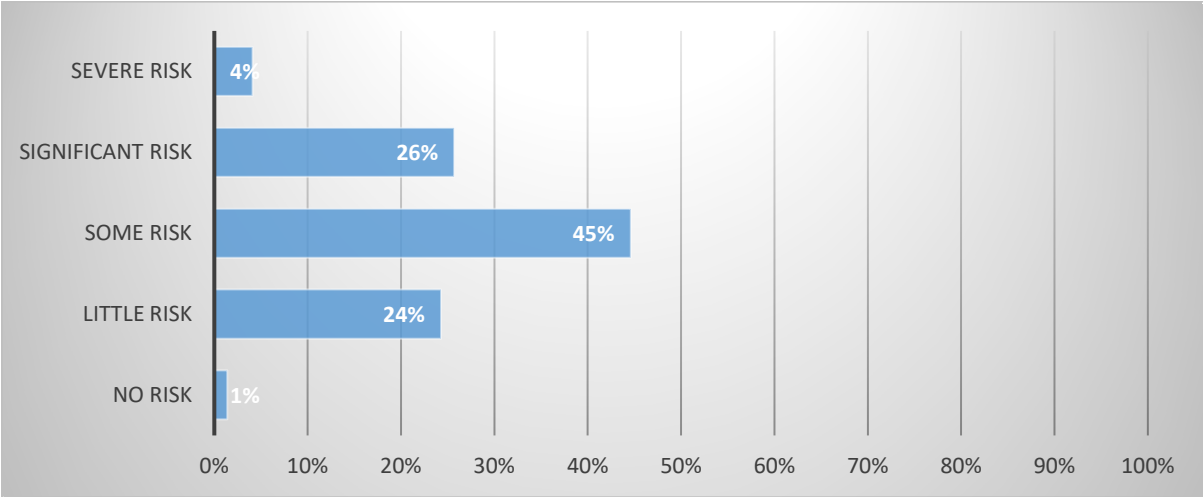
***Item 87b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 88a: How often do you monitor a patient’s progress or response to treatment utilizing follow-up testing of body impedance analysis, functional tests, etc.?***

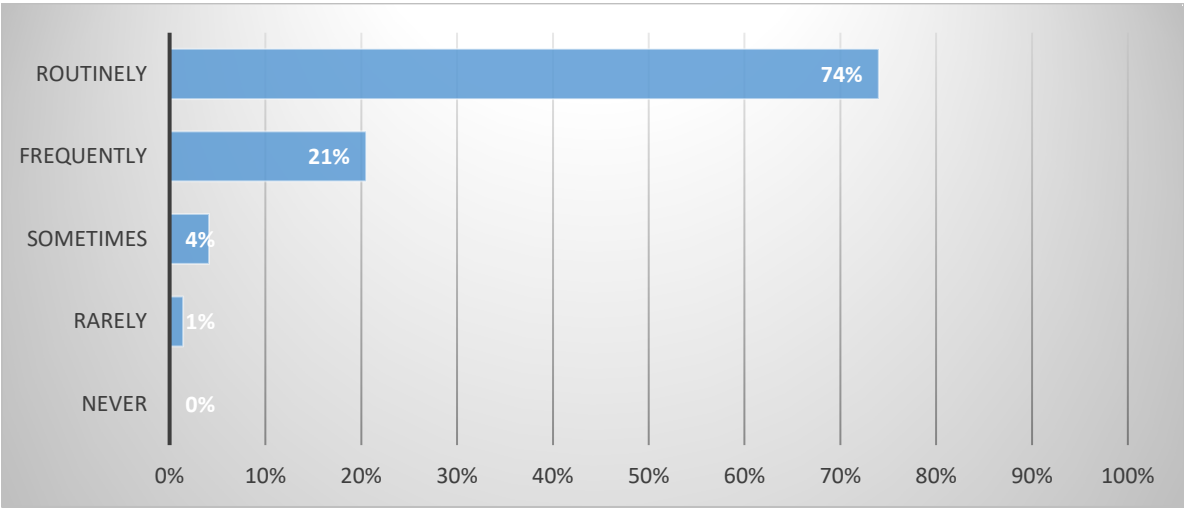


***Item 88b: What is the risk to the patient’s health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

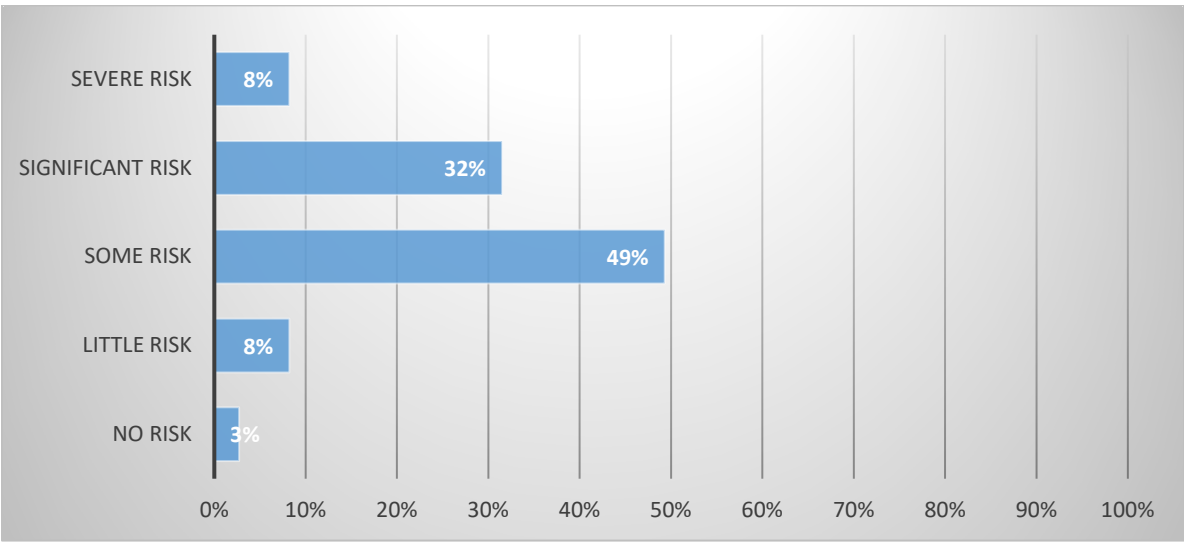




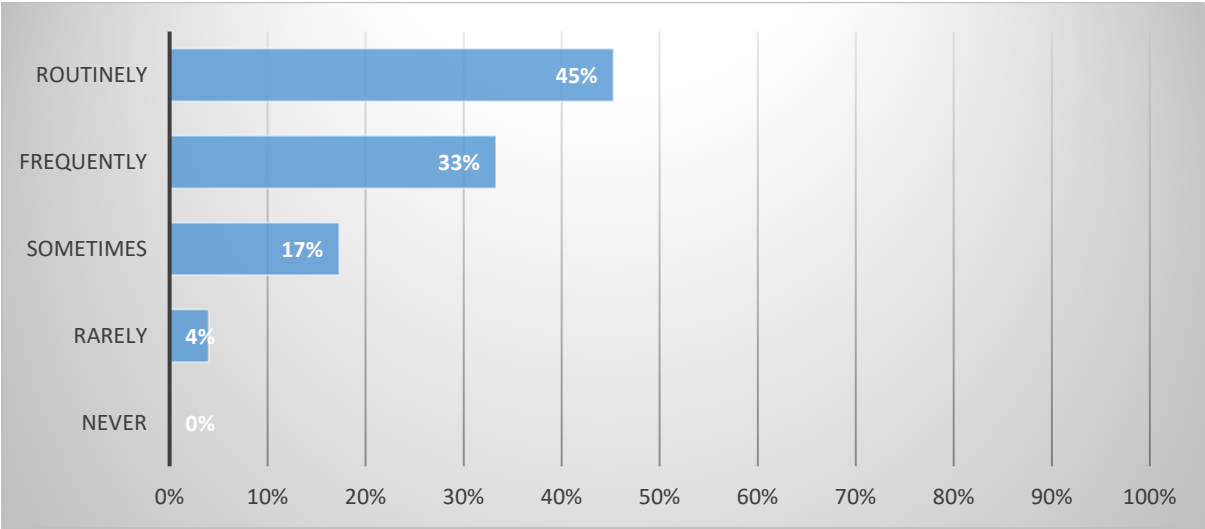
**Item 89a:** *How often do you monitor a patient’s progress or response to treatment utilizing follow-up?*



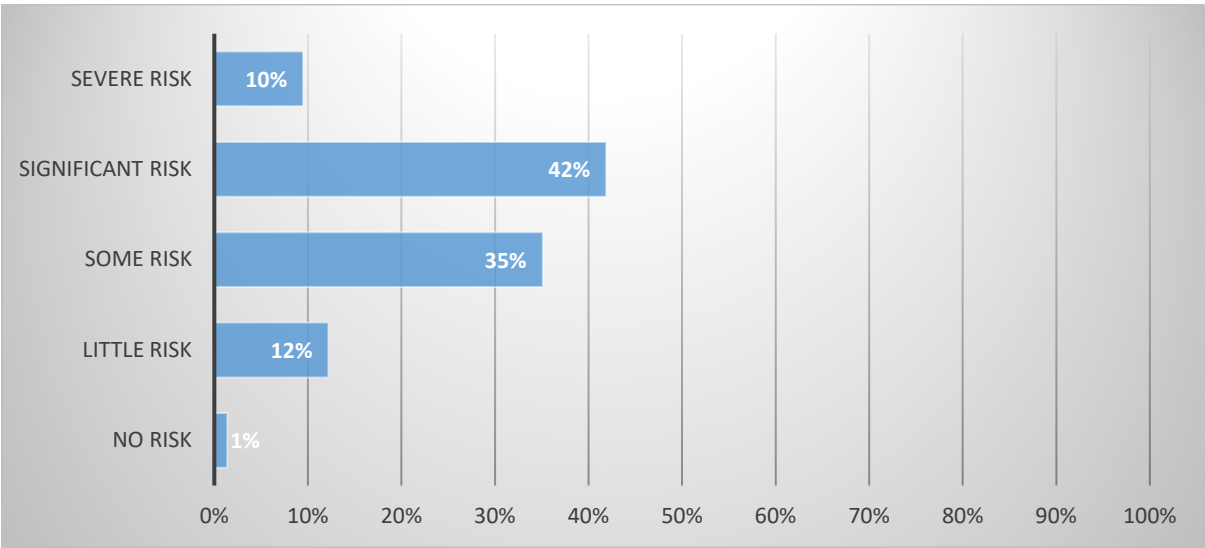
**Item 89b:** *What is the risk to the patient’s health or safety when a chiropractor poorly performs or misinterprets this assessment task?*



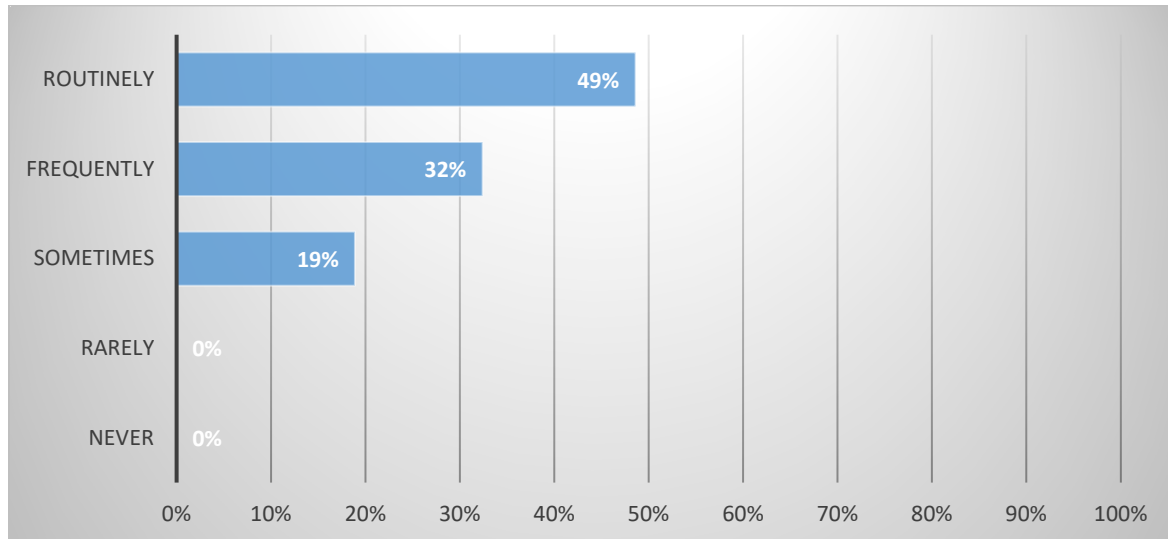
***Item 90a: How often do you monitor a patient's progress or response to treatment utilizing follow-up lab tests?***



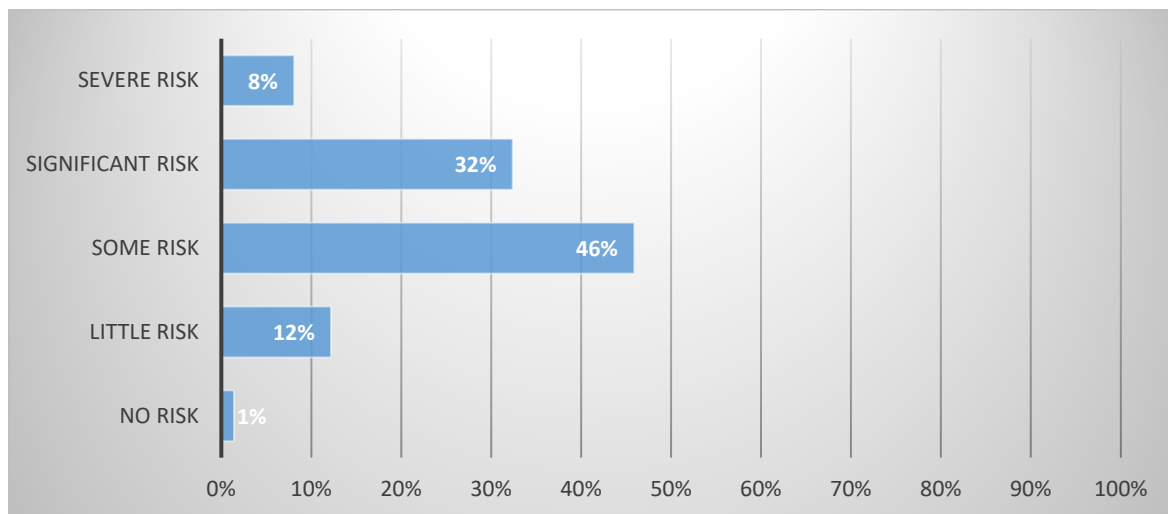
***Item 90b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



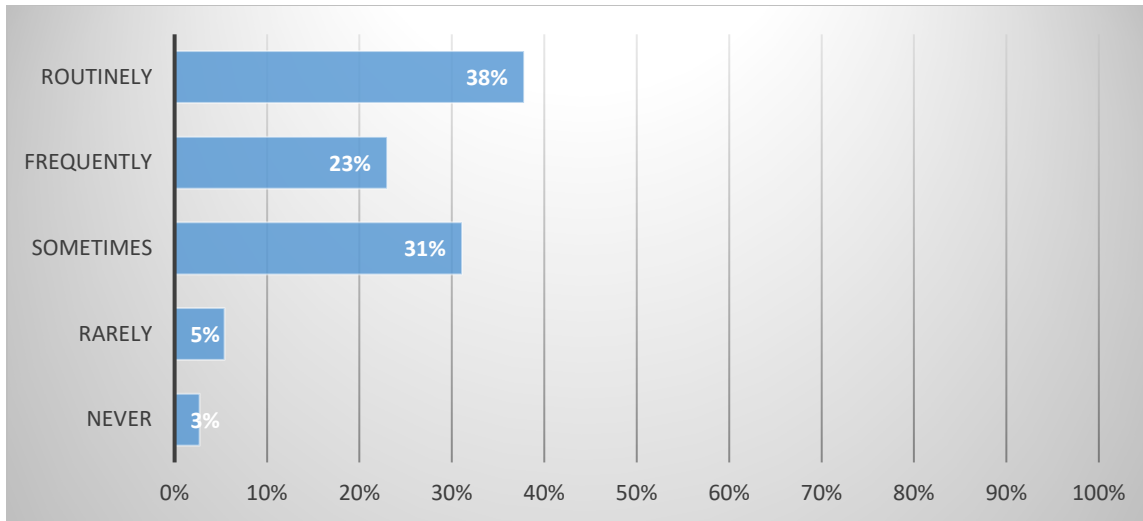
***Item 91a: How often do you re-examine a patient with physical examination procedures, either periodically or when the patient s condition materially changes?***



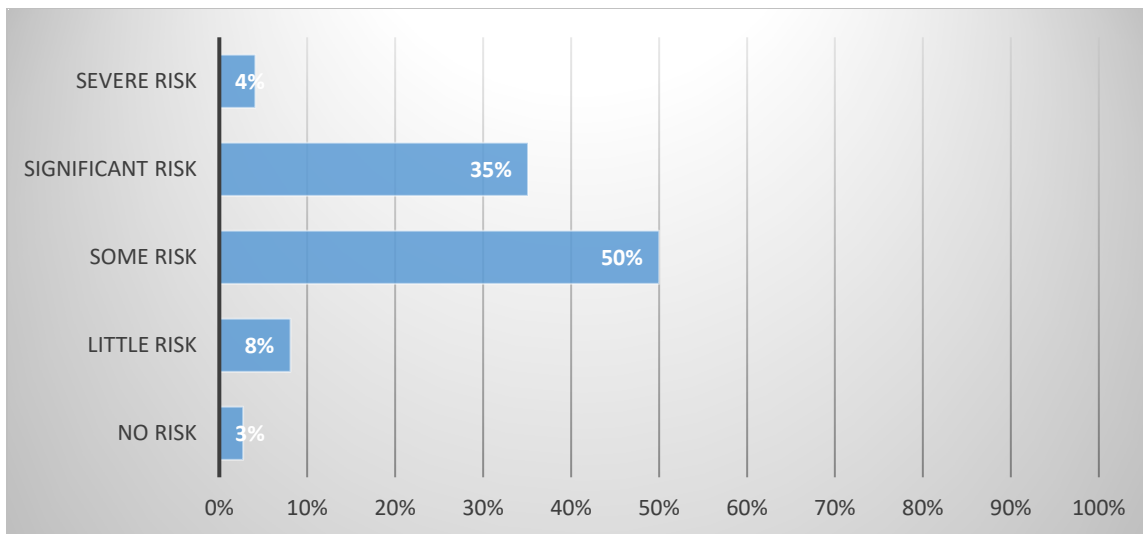
***Item 91b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



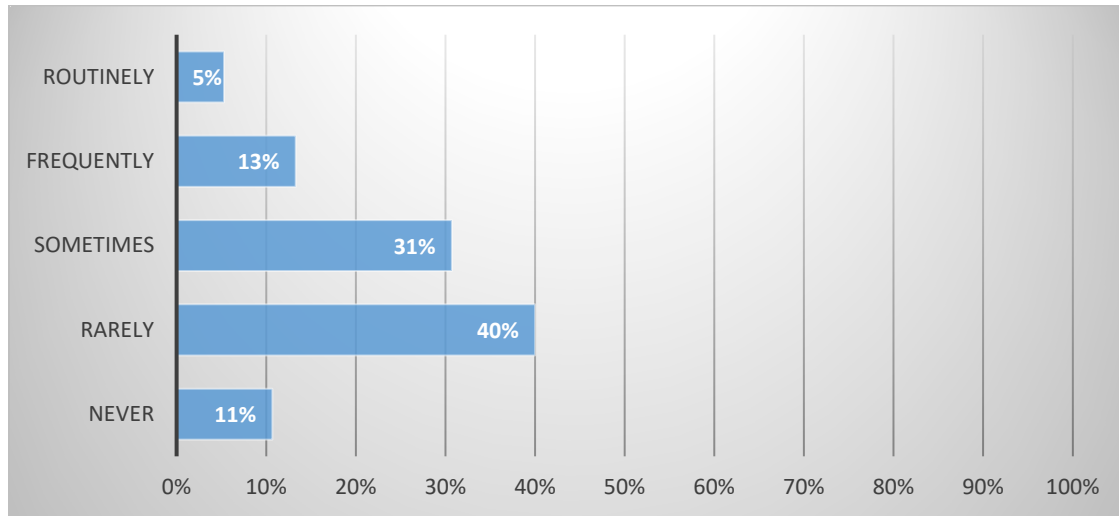
***Item 92a: How often do you re-examine a patient with nutrition-focused orthopedic/neurologic examination procedures, either periodically or when the patient's condition materially changes?***



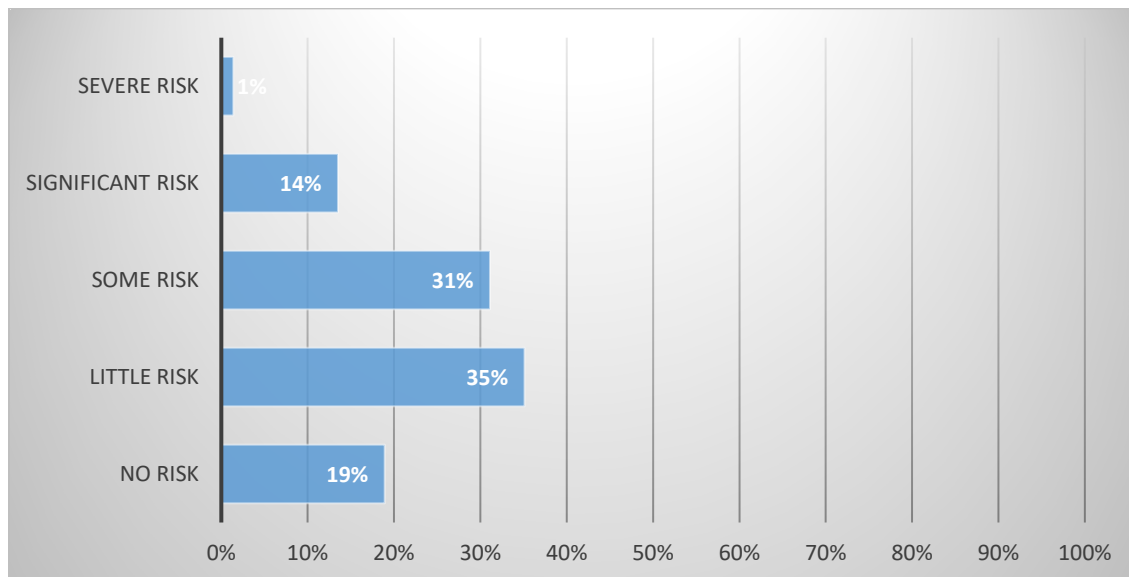
***Item 92b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



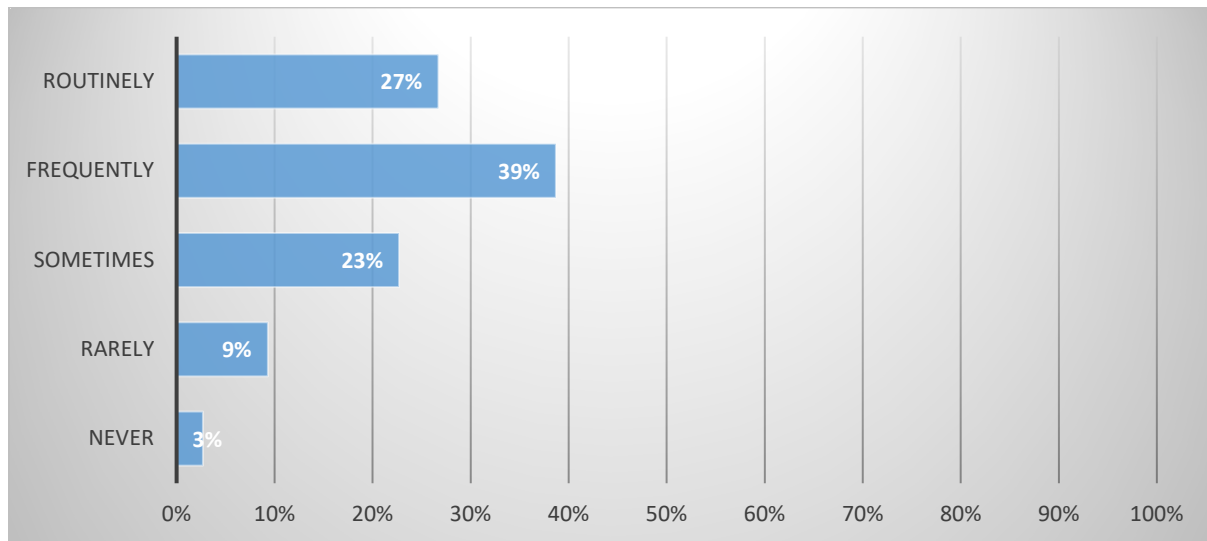
***Item 93a: How often do you write a narrative report (not daily notes)?***



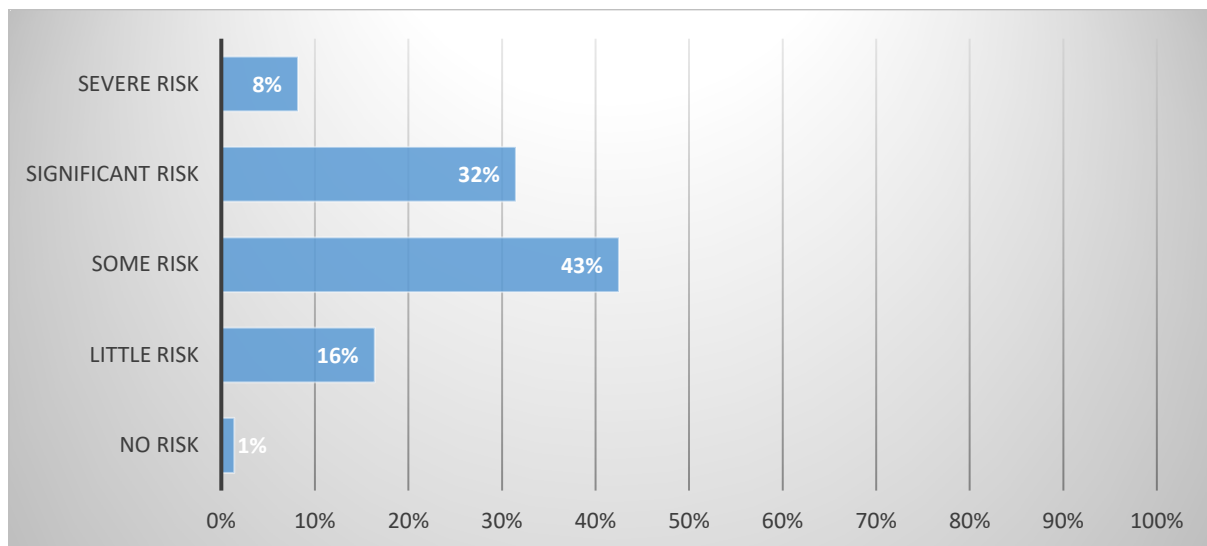
***Item 93b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



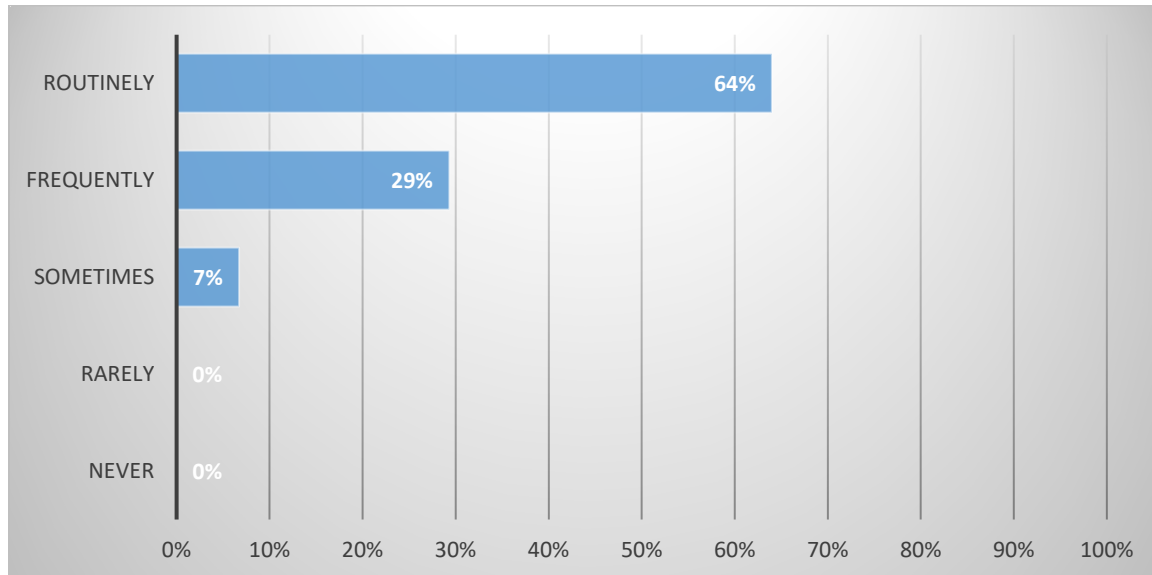
***Item 94a: How often do you provide stress management guidance?***



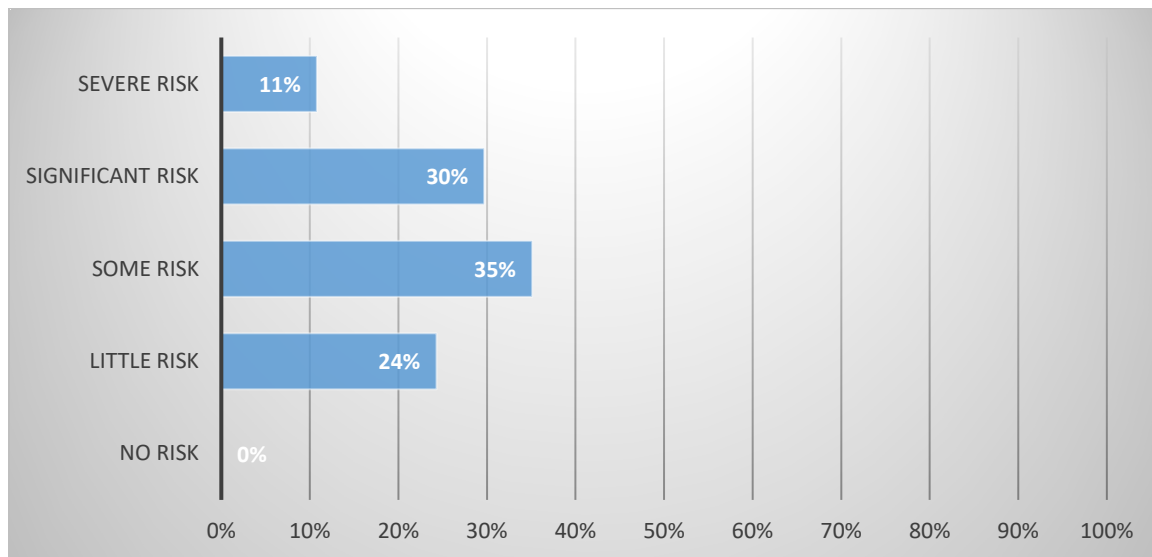
***Item 94b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



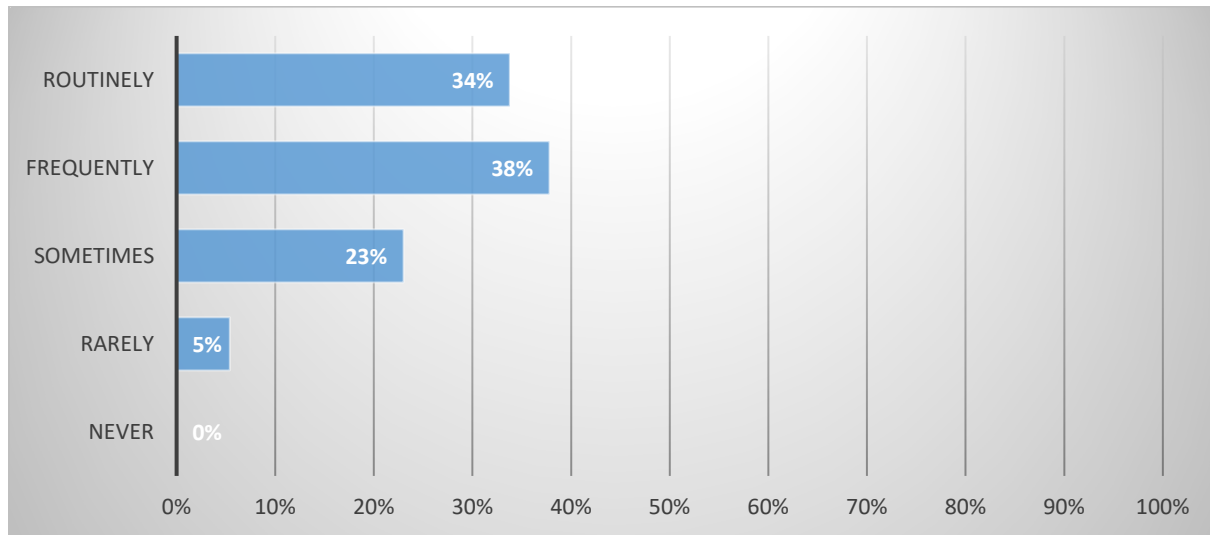
***Item 95a: How often do you provide instruction advice regarding activities daily living?***



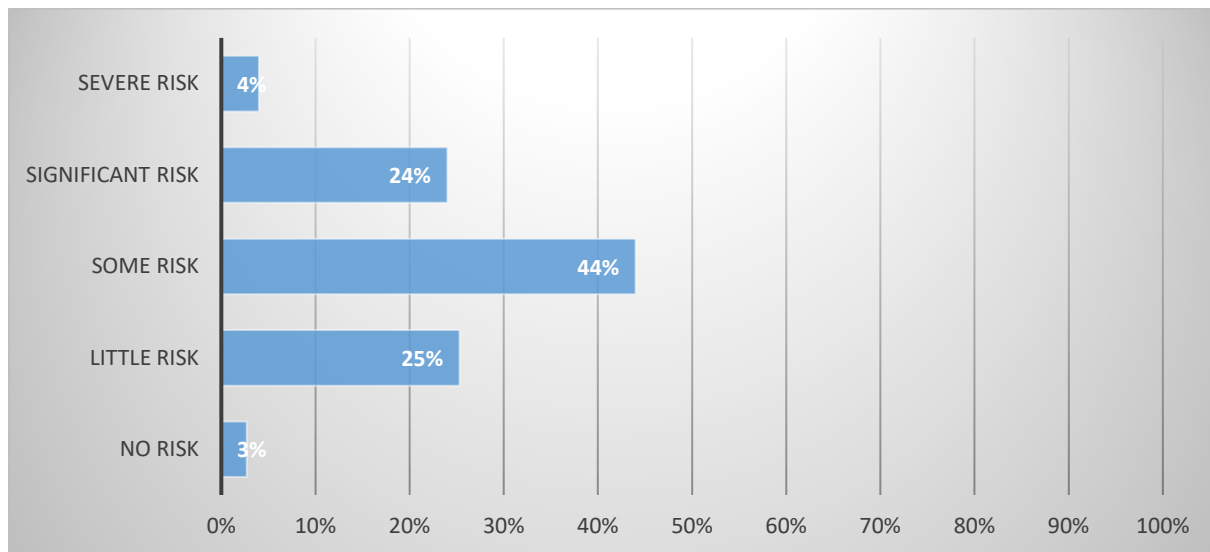
***Item 95b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 96a: How often do you provide instruction in label reading and food shopping?***

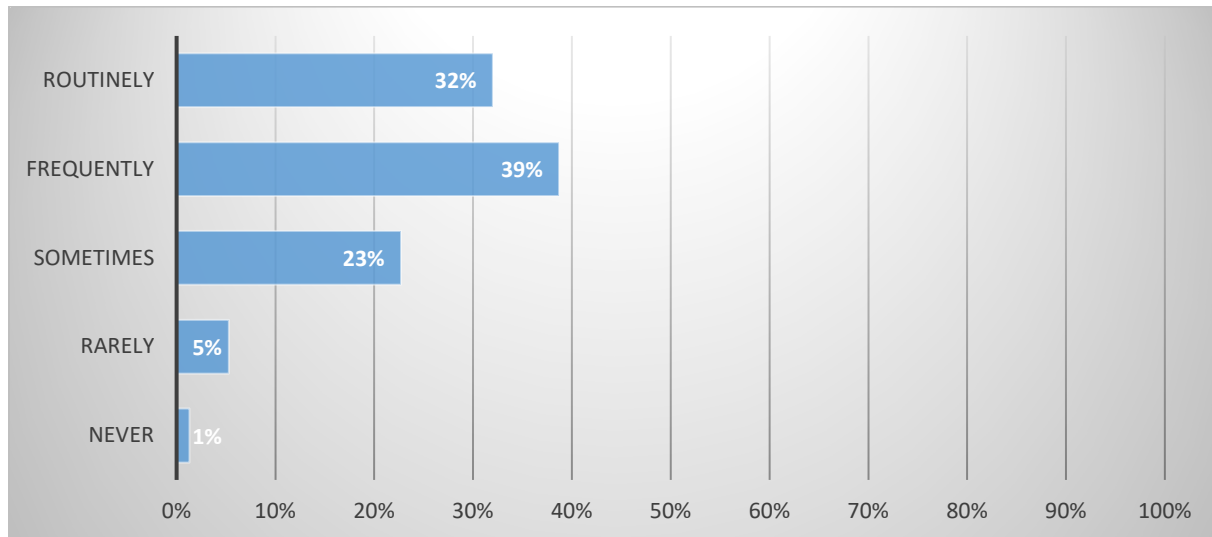


***Item 96b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

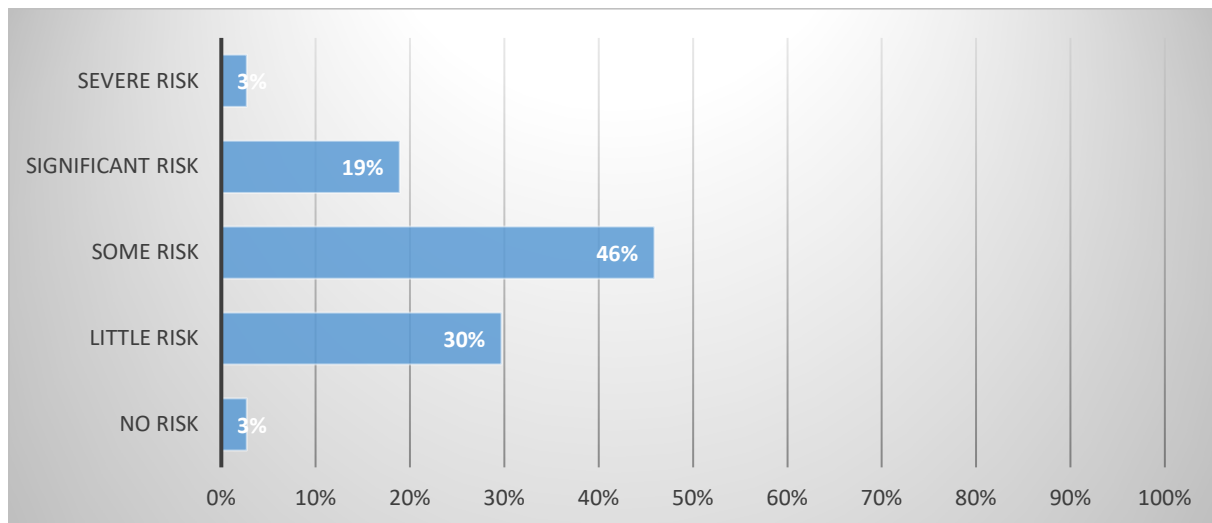




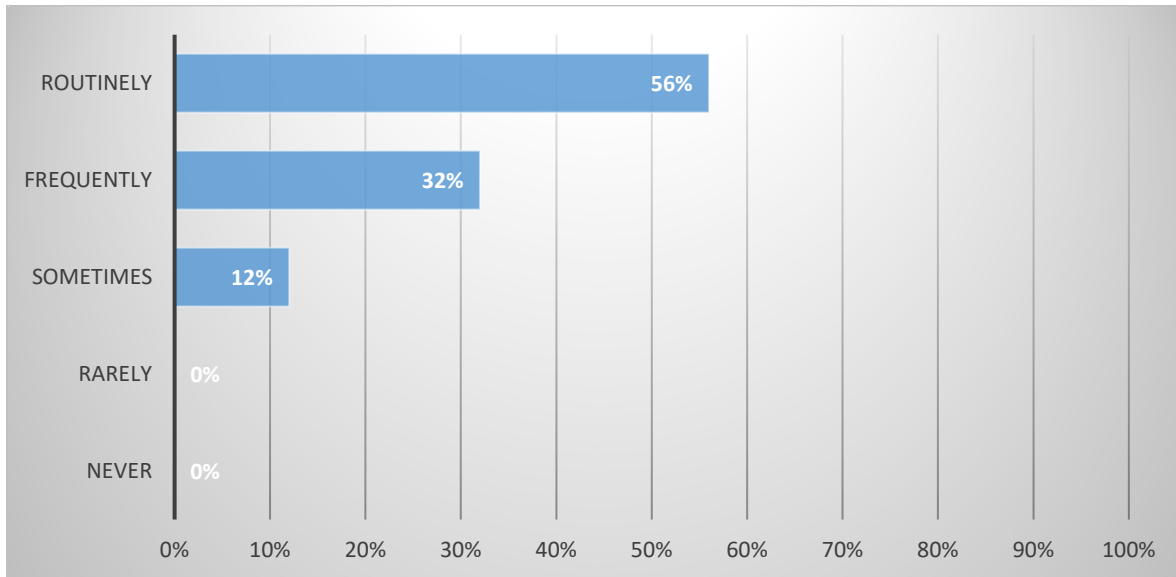
***Item 97a: How often do you provide advice regarding food preparation?***



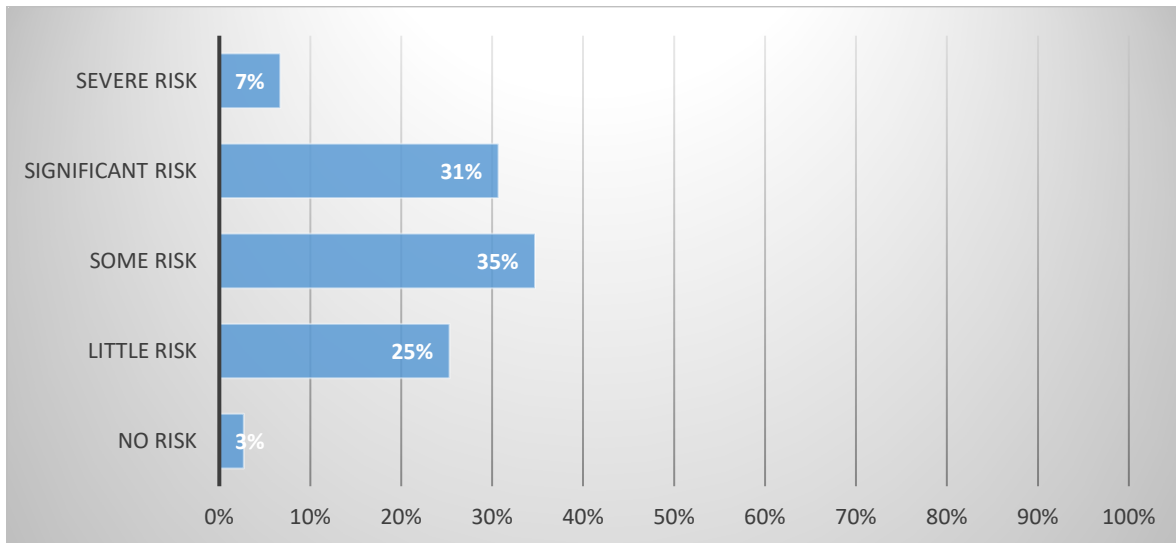
***Item 97b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



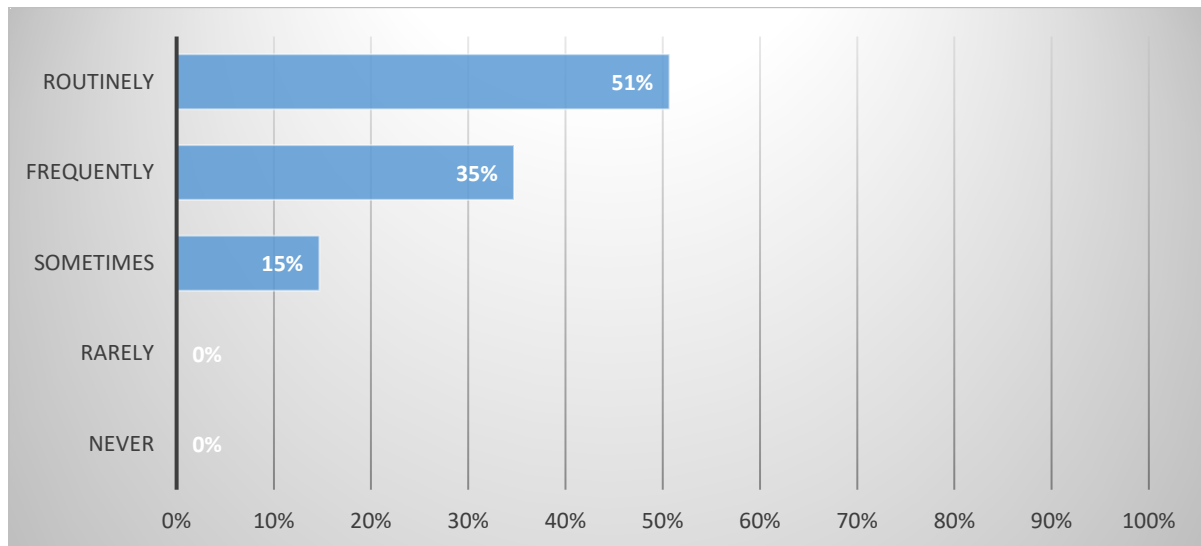
***Item 98a: How often do you provide education or advice regarding health promotion and wellness care?***



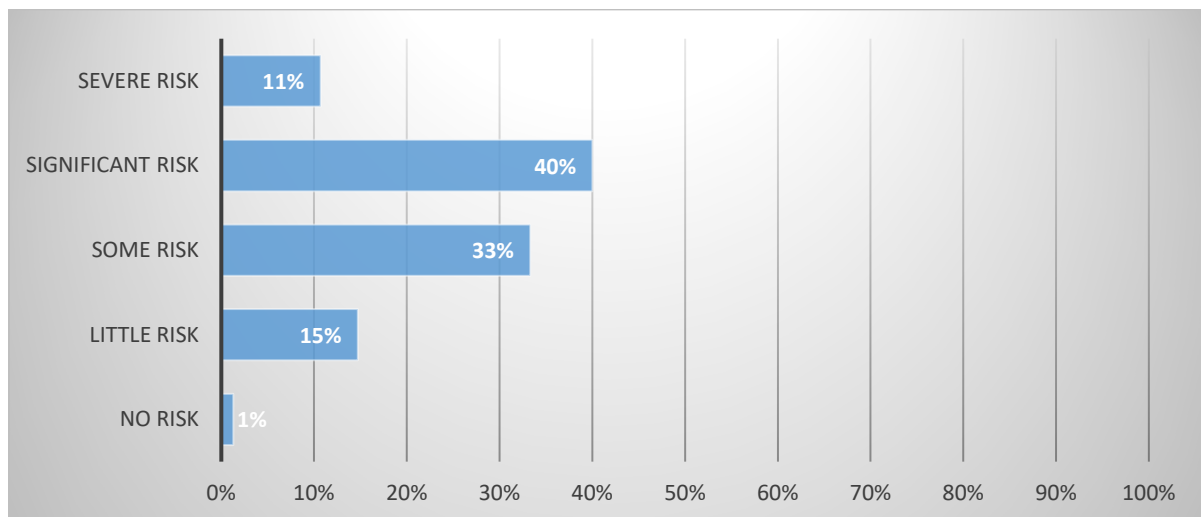
***Item 98b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



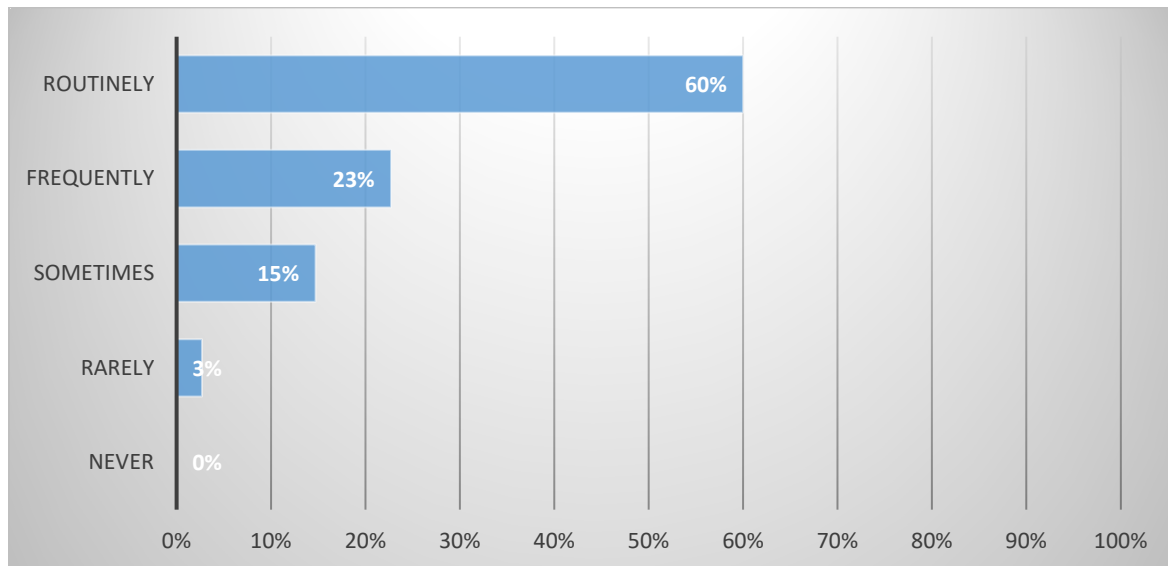
***Item 99a: How often do you advise, or counsel patients regarding disease, prevention and early detection?***



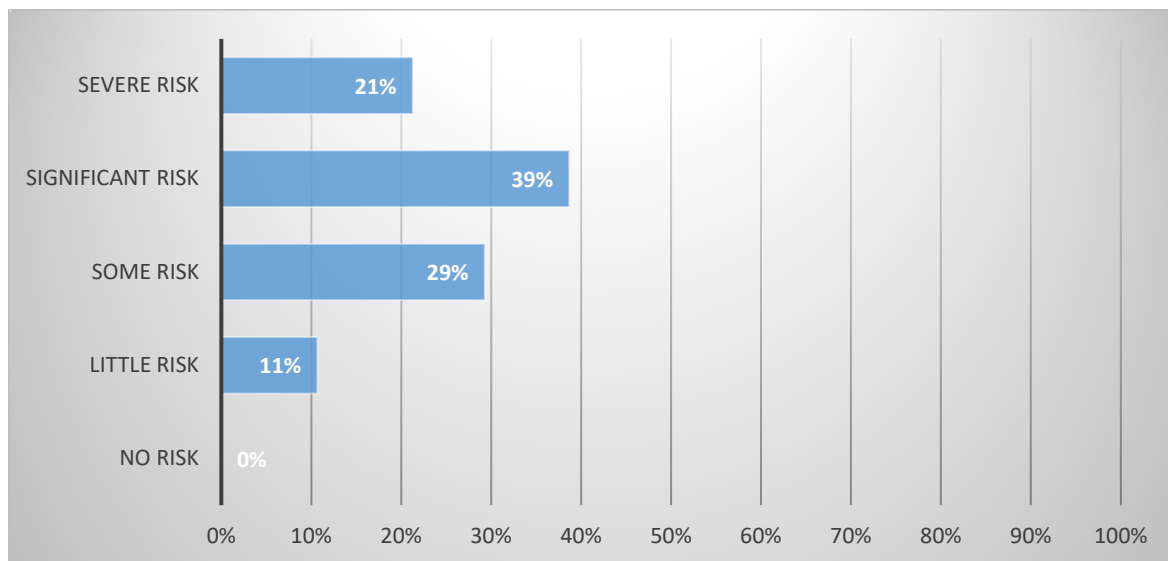
***Item 99b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



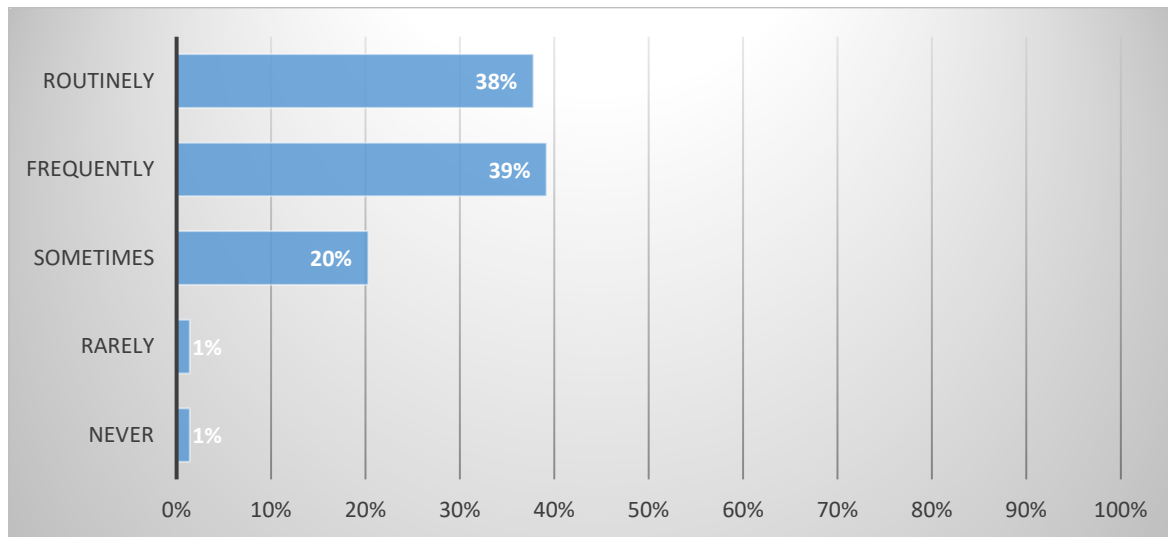
***Item 100a: How often do you advise patients to change risky or unhealthy behaviors?***



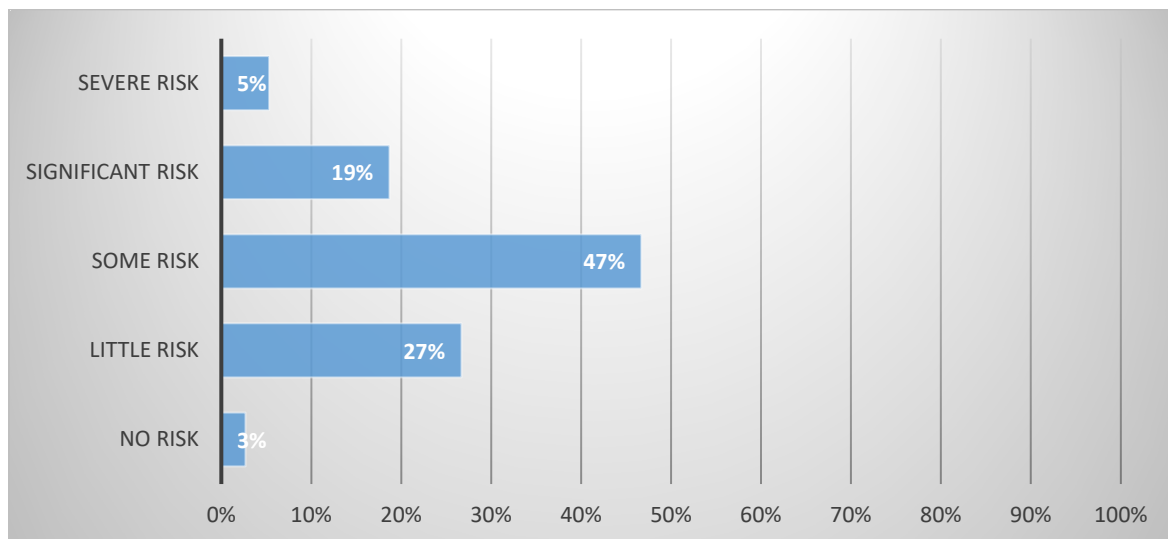
***Item 100b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



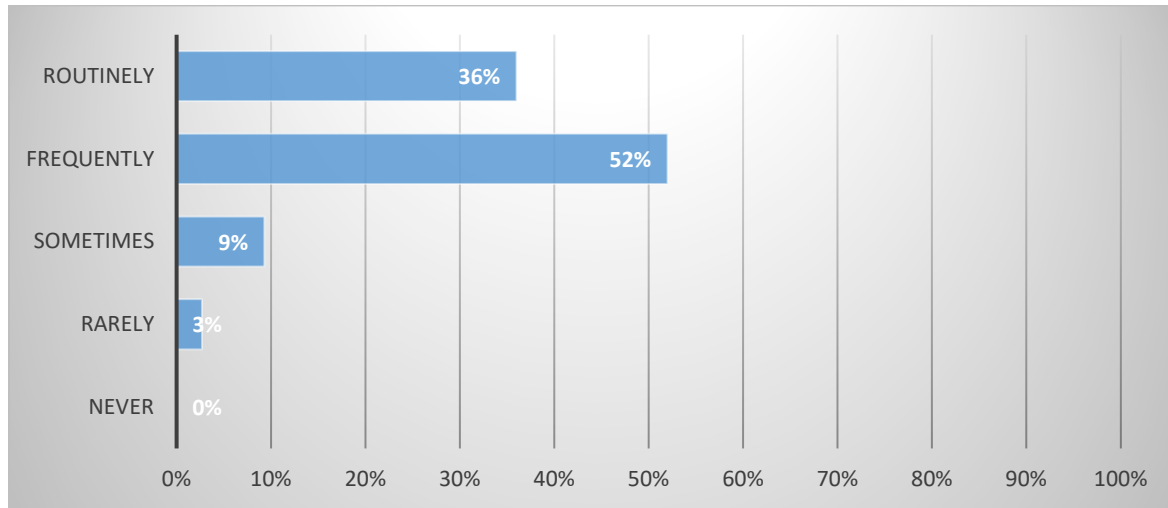
***Item 101a: How often do you advise patients in proper ergonomics/posture?***



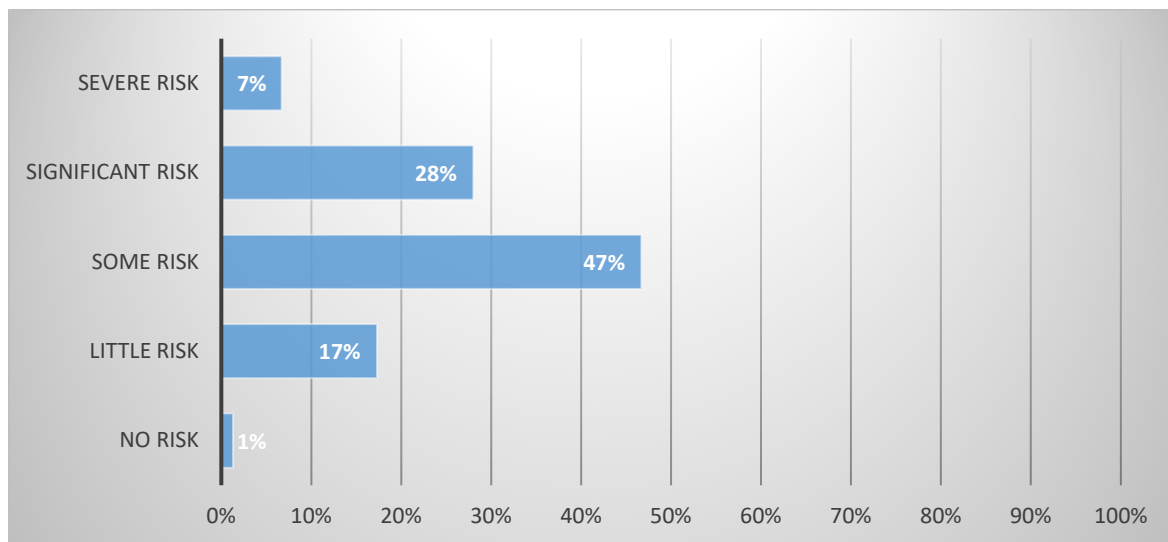
***Item 101b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



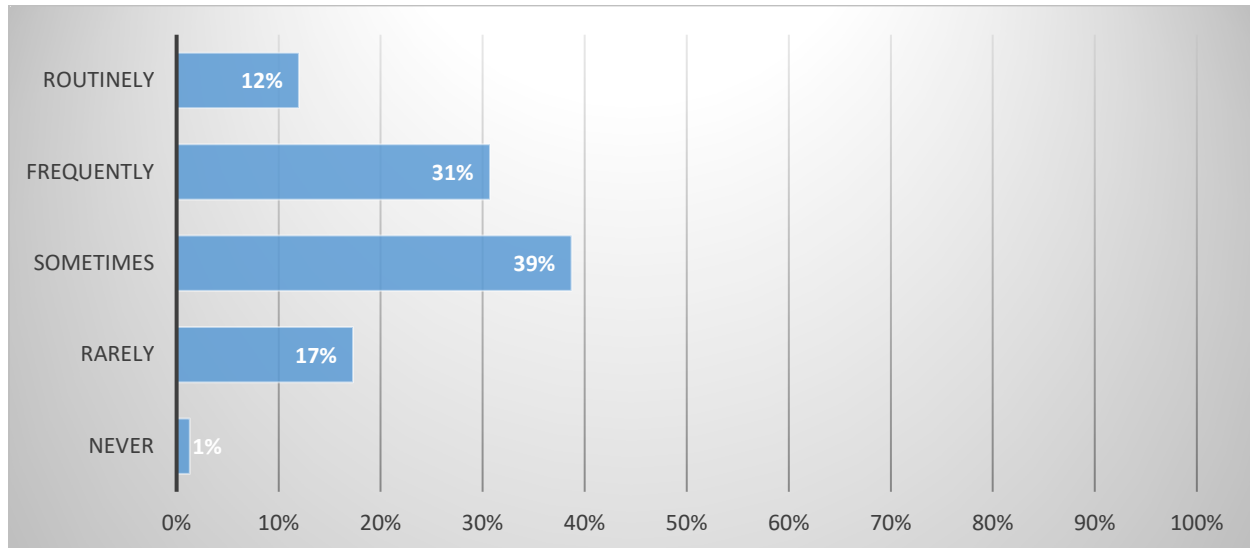
***Item 102a: How often do you advise patients in proper physical fitness and exercise techniques?***



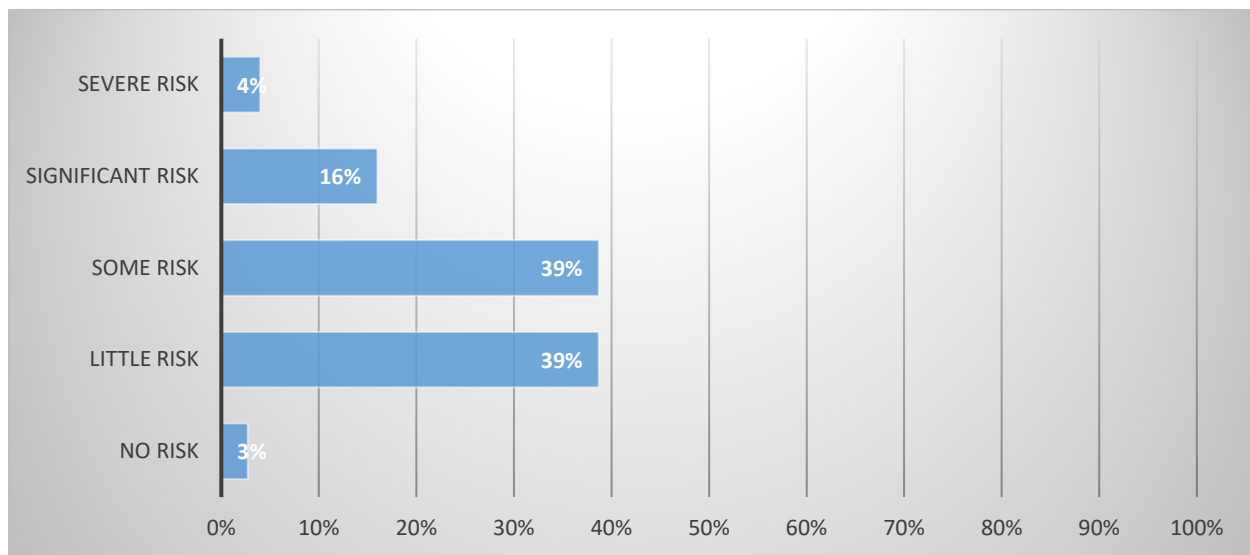
***Item 102b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



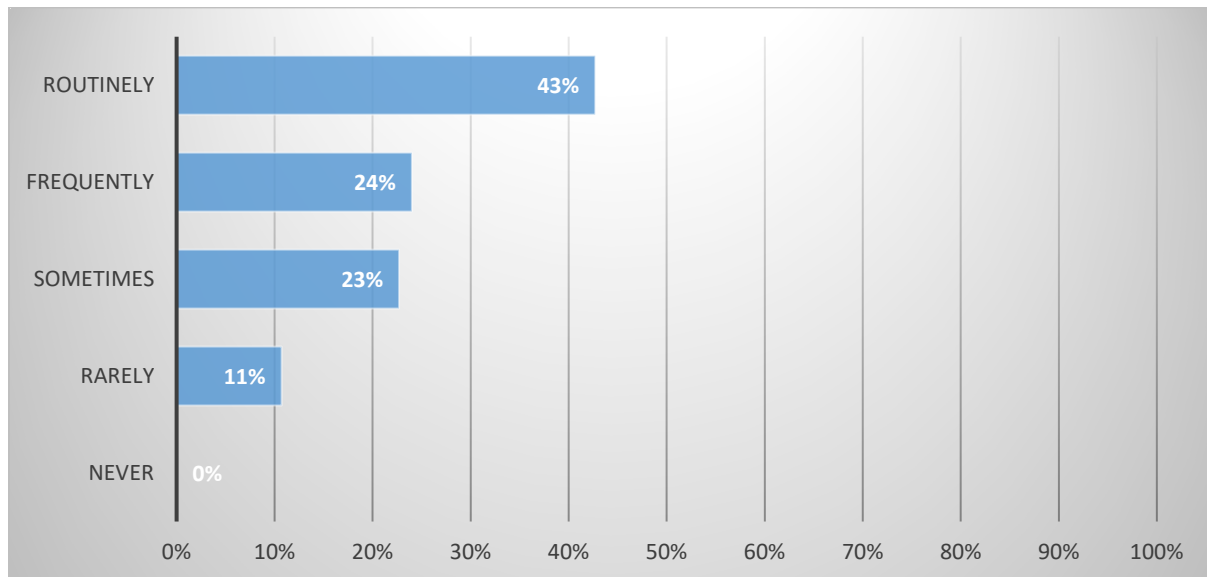
***Item 103a: How often do you provide patients with recommendations regarding their personal hygiene?***



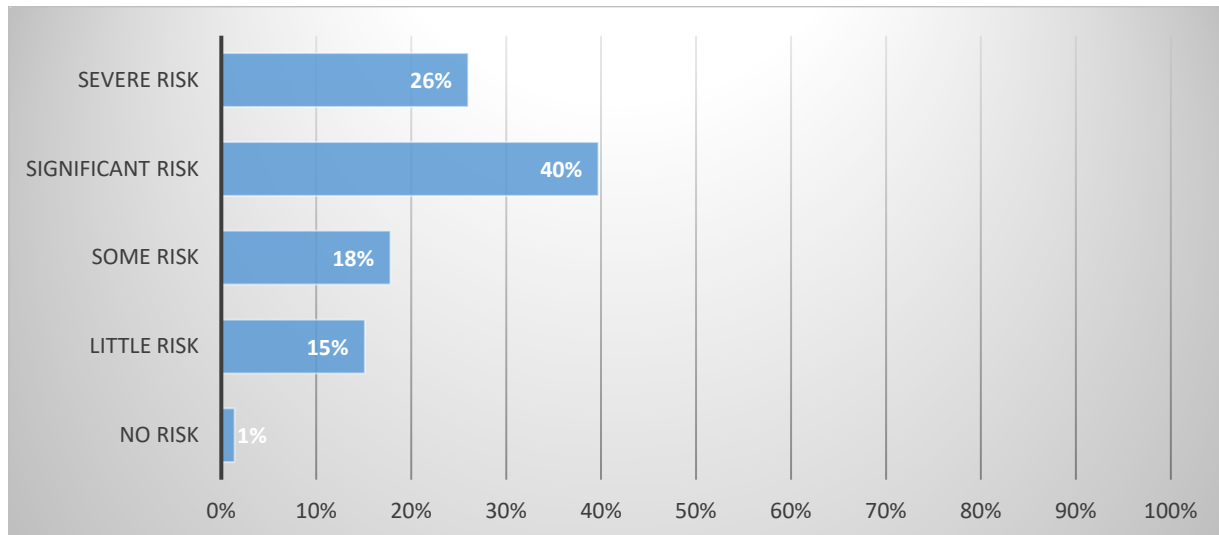
***Item 103b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 104a: How often do you advise patients regarding smoking cessation?***

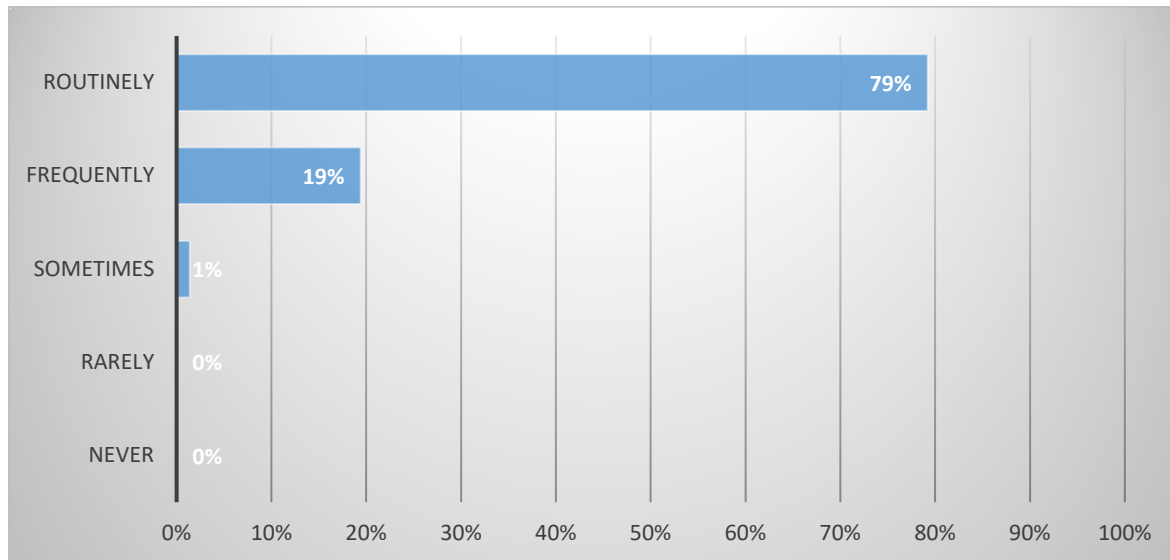


***Item 104b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

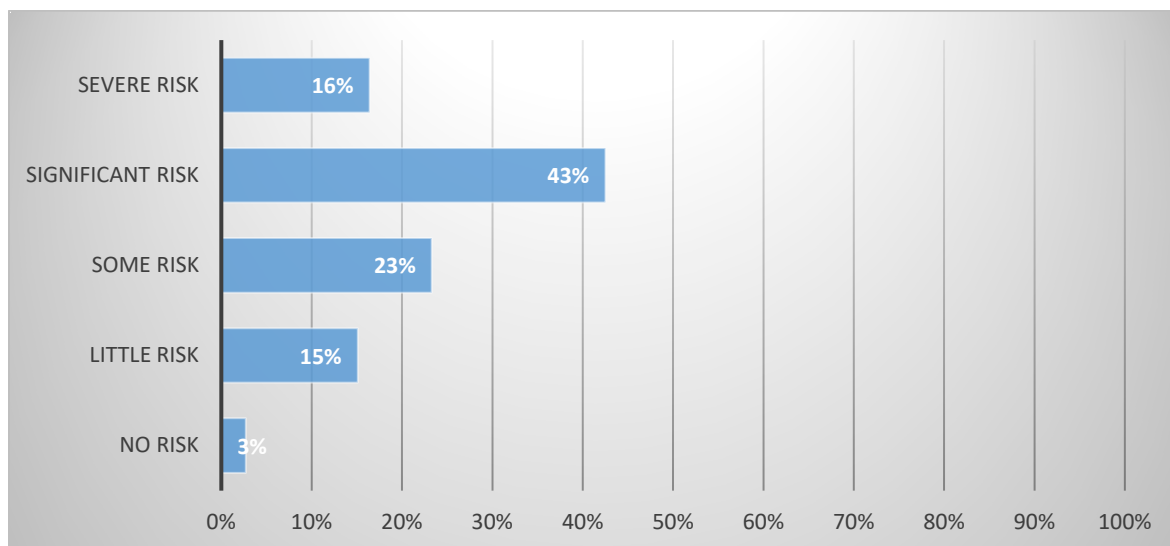




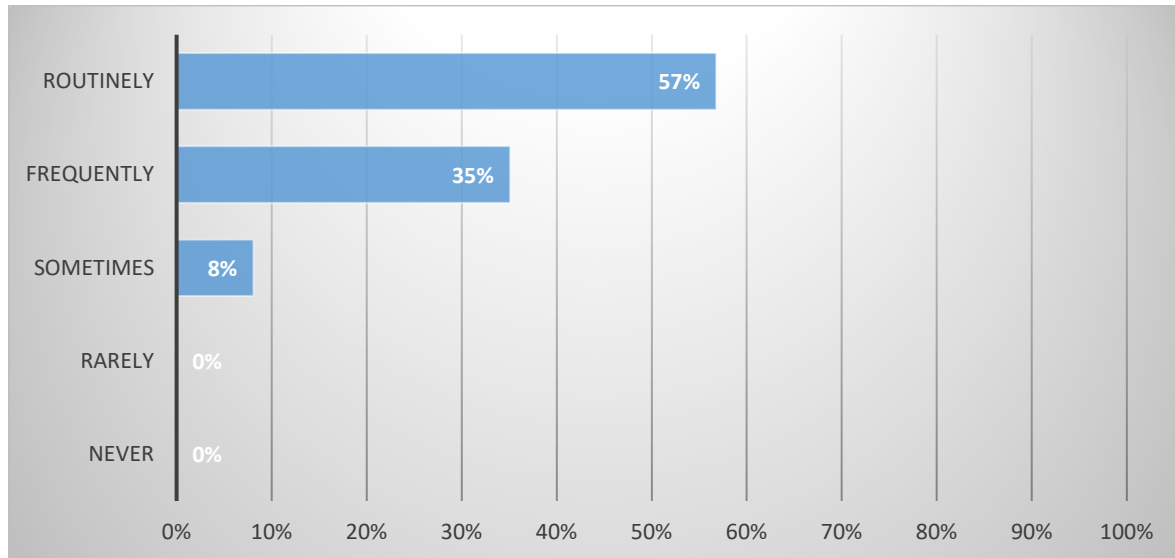
***Item 105a: How often do you advise patients regarding nutritional/dietary habits?***



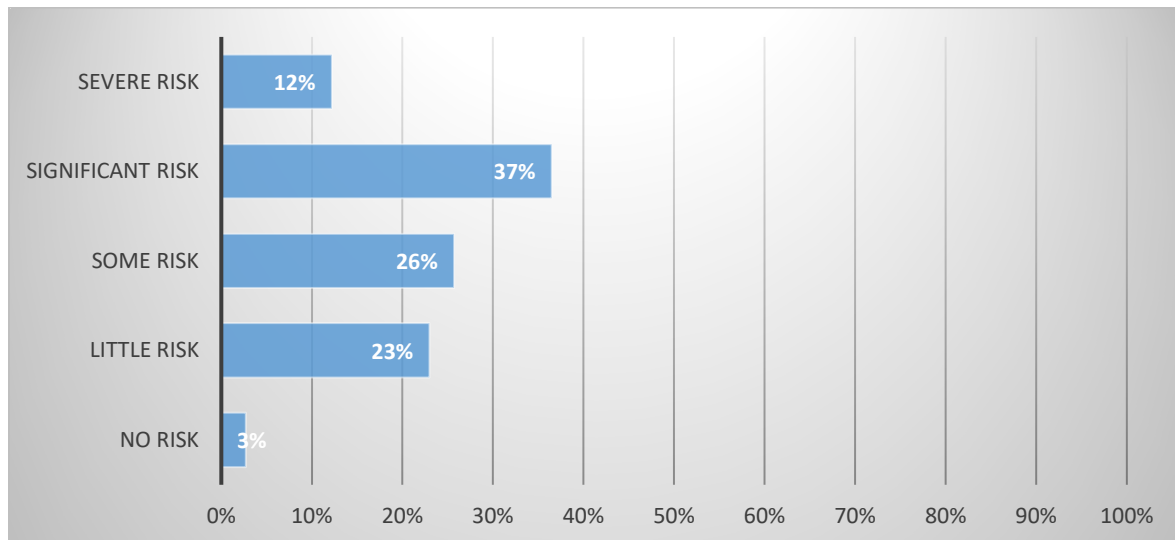
***Item 105b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



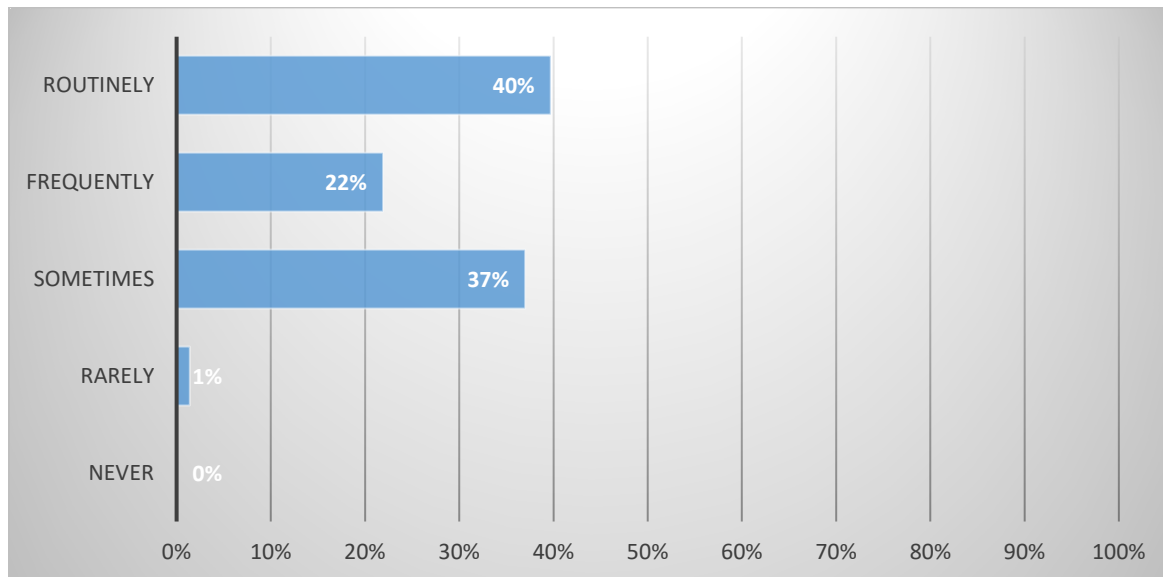
***Item 106a: How often do you counsel patients on proper sleep quantity and quality?***



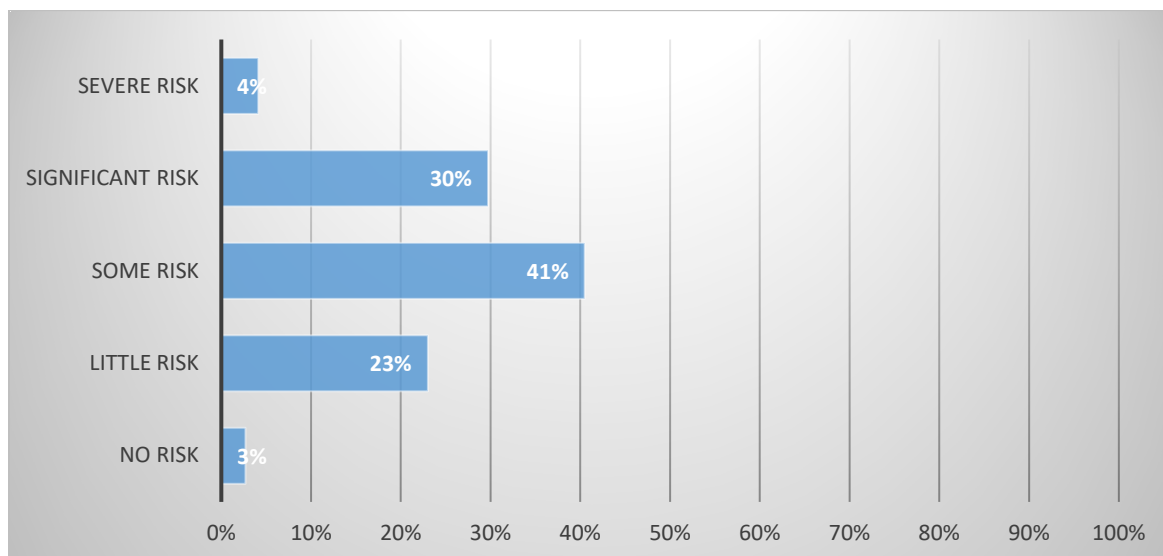
***Item 106b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



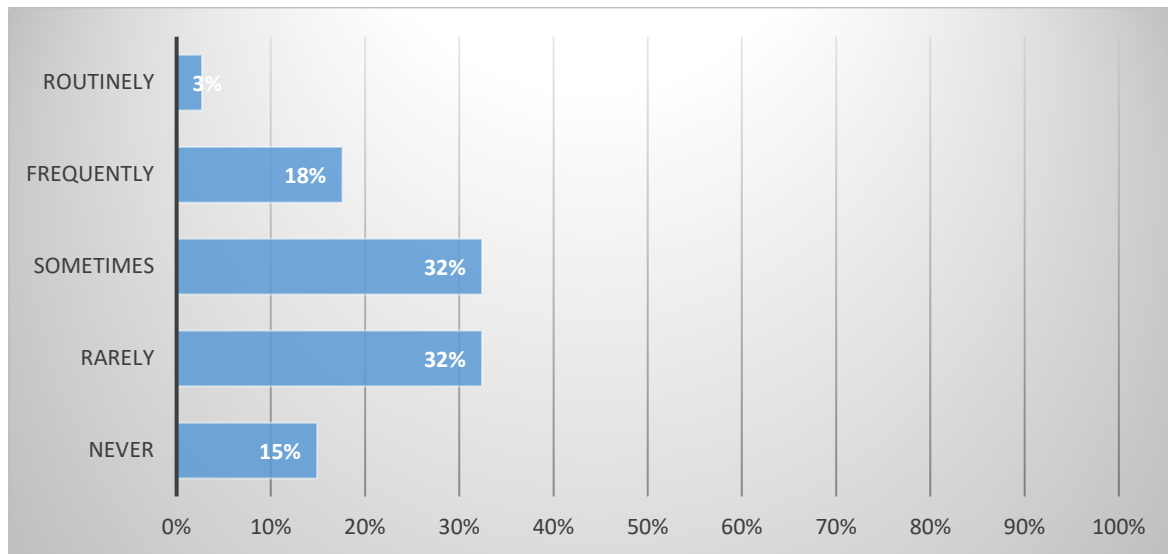
***Item 107a: How often do you review genitourinary and reproductive histories?***



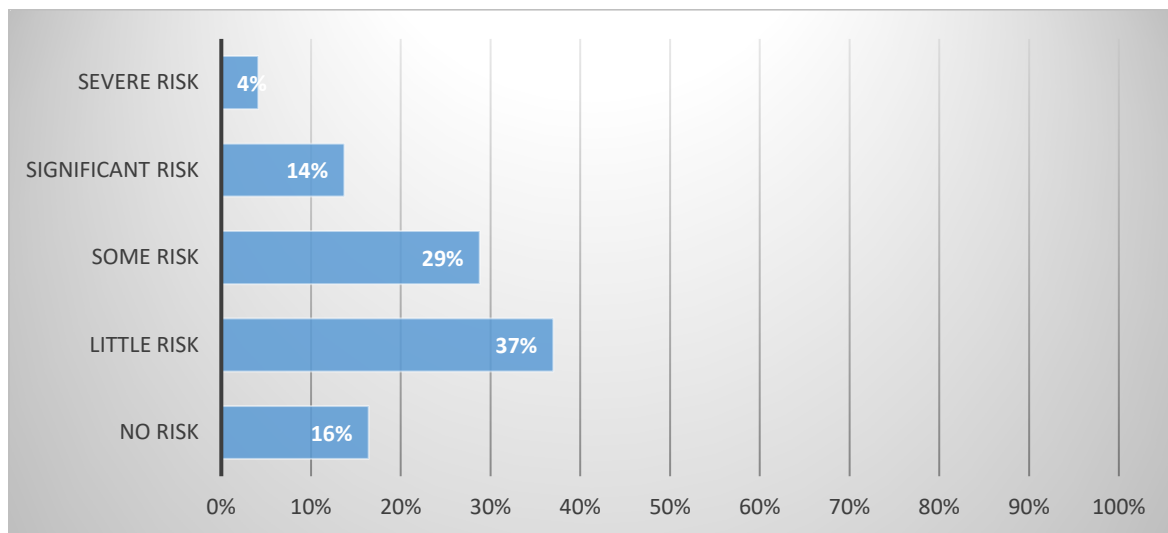
***Item 107b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



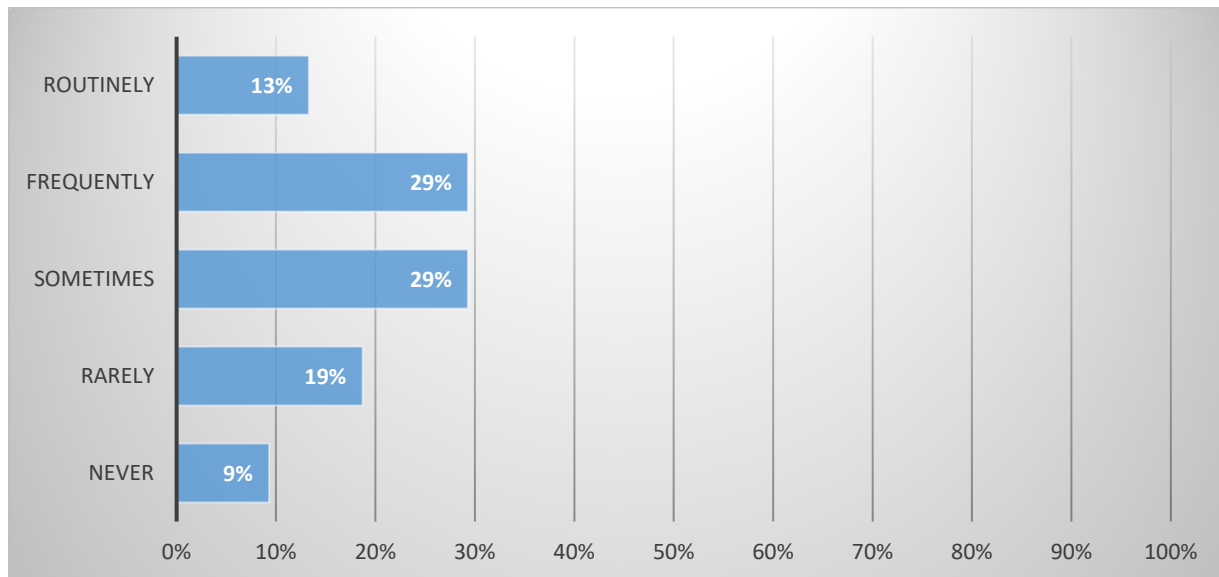
***Item 109a: How often do you use homeopathy?***



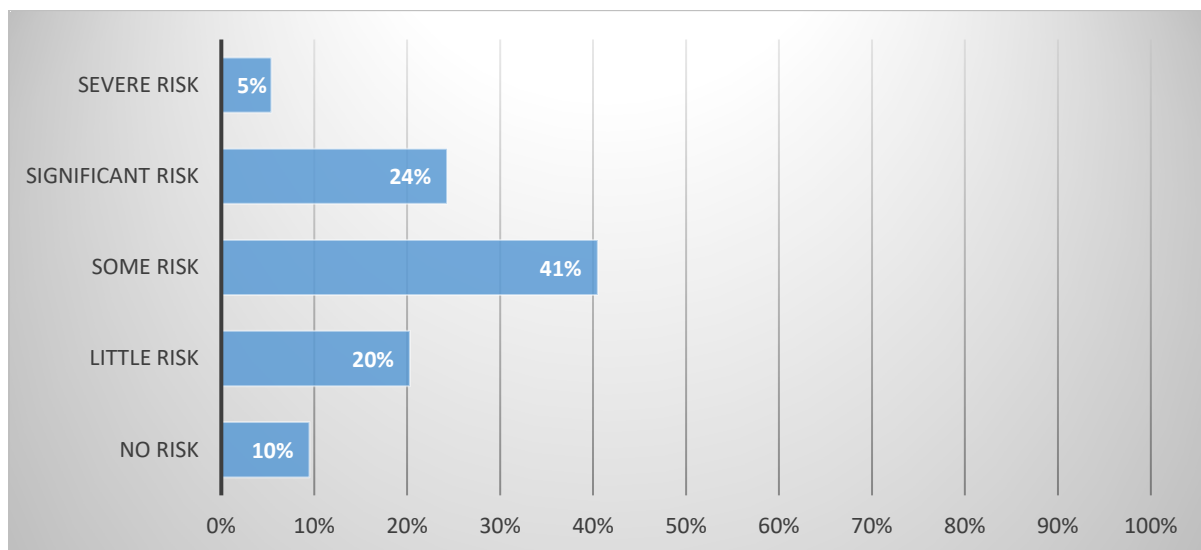
***Item 109b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



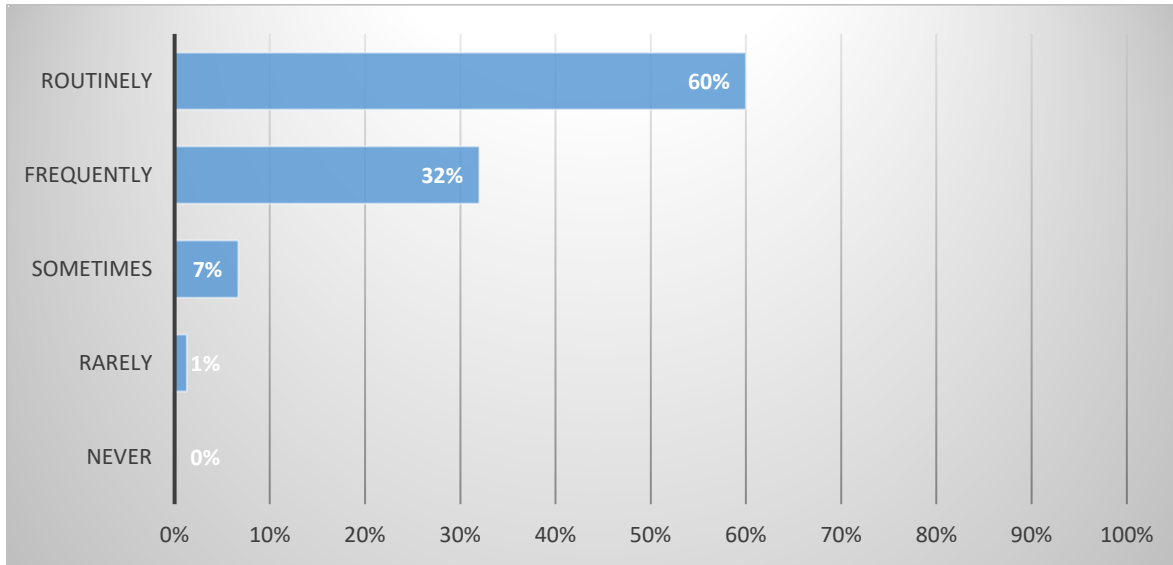
***Item 110a: How often do you use glandular therapy?***



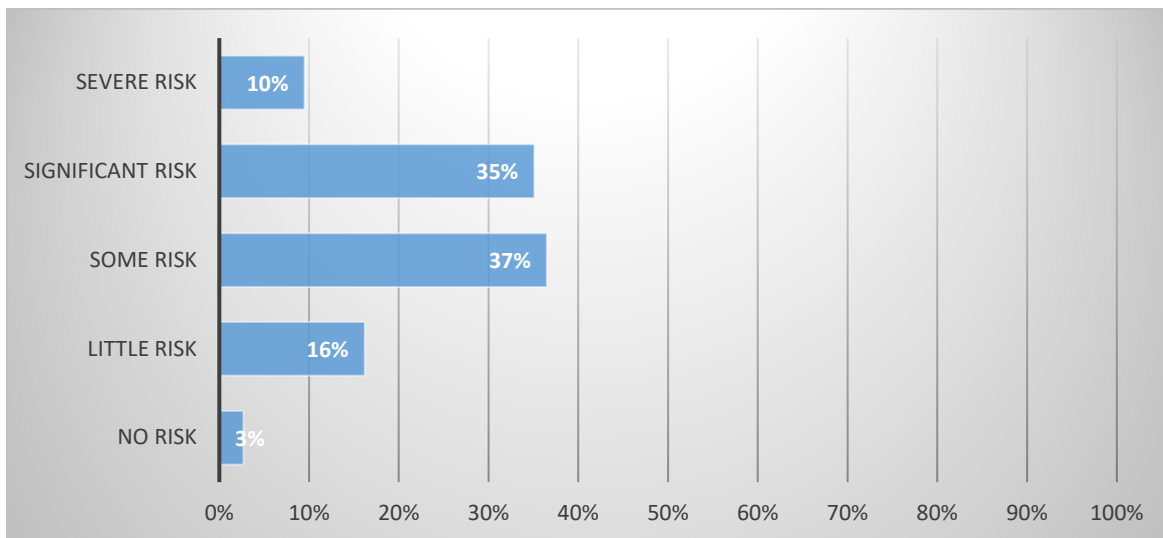
***Item 110b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



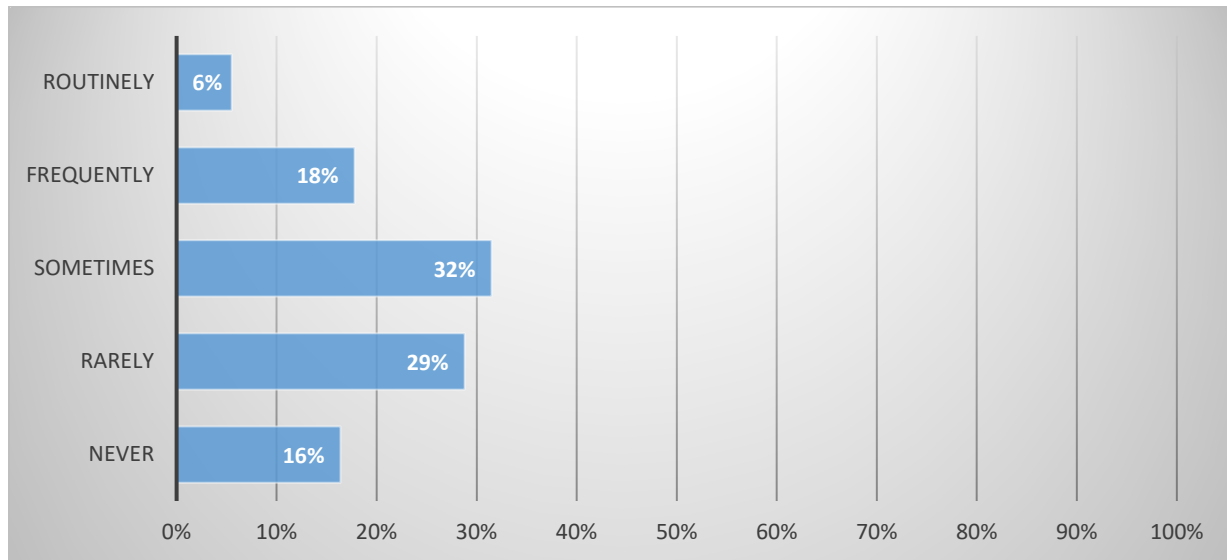
***Item 111a: How often do you recommend therapeutic levels of vitamins and minerals?***



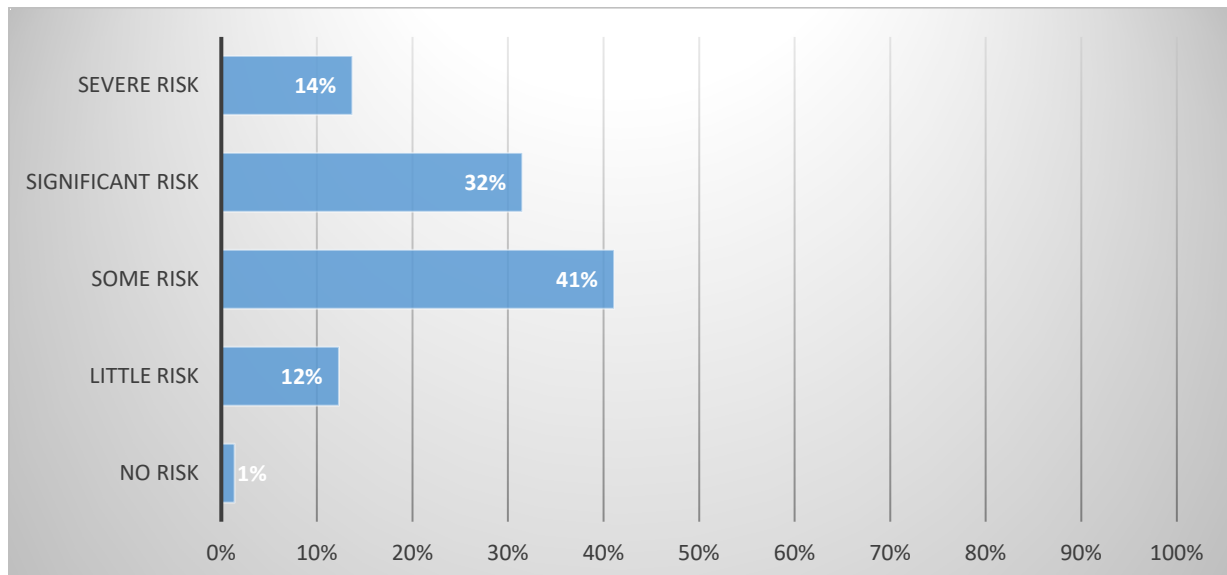
***Item 111b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



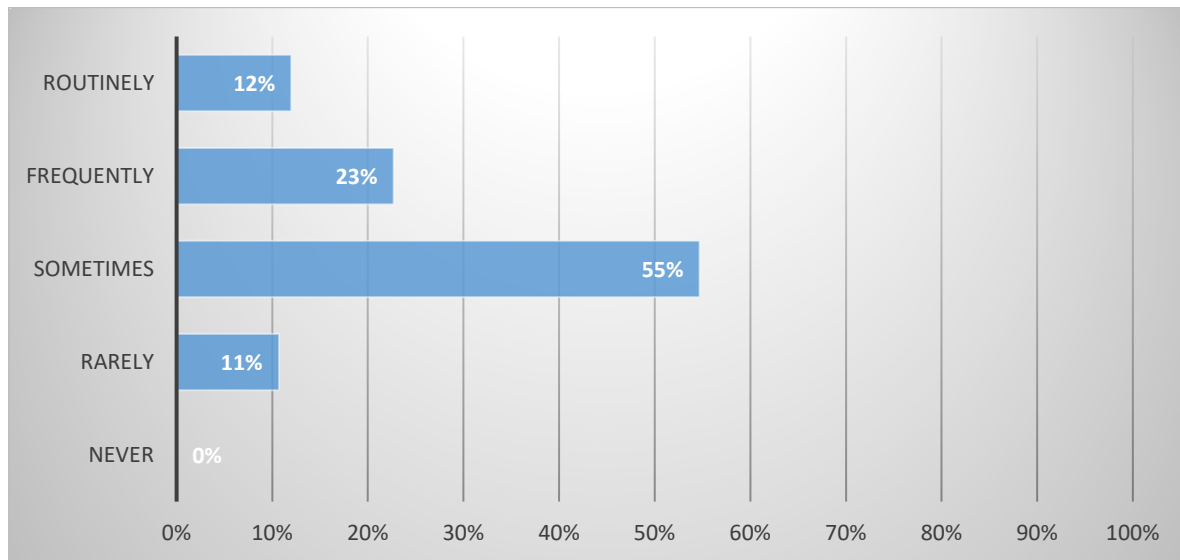
***Item 112a: How often do you use hormone therapy (e. g., growth, melatonin, progesterone)?***



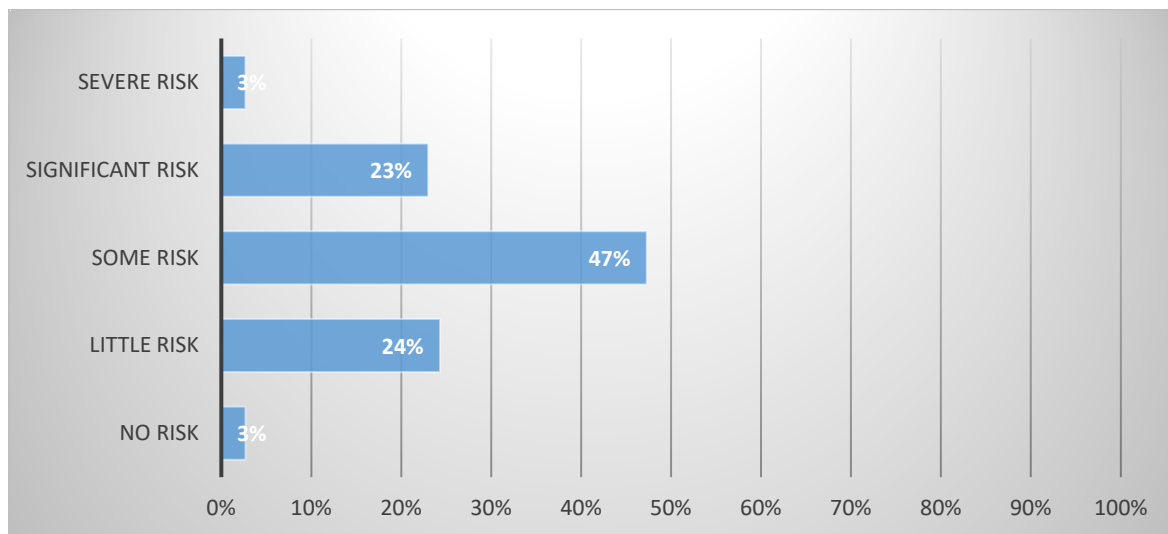
***Item 112b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 113a: How often do you use specific amino acid therapy (e.g., arginine, glutamine, tryptophan)?***

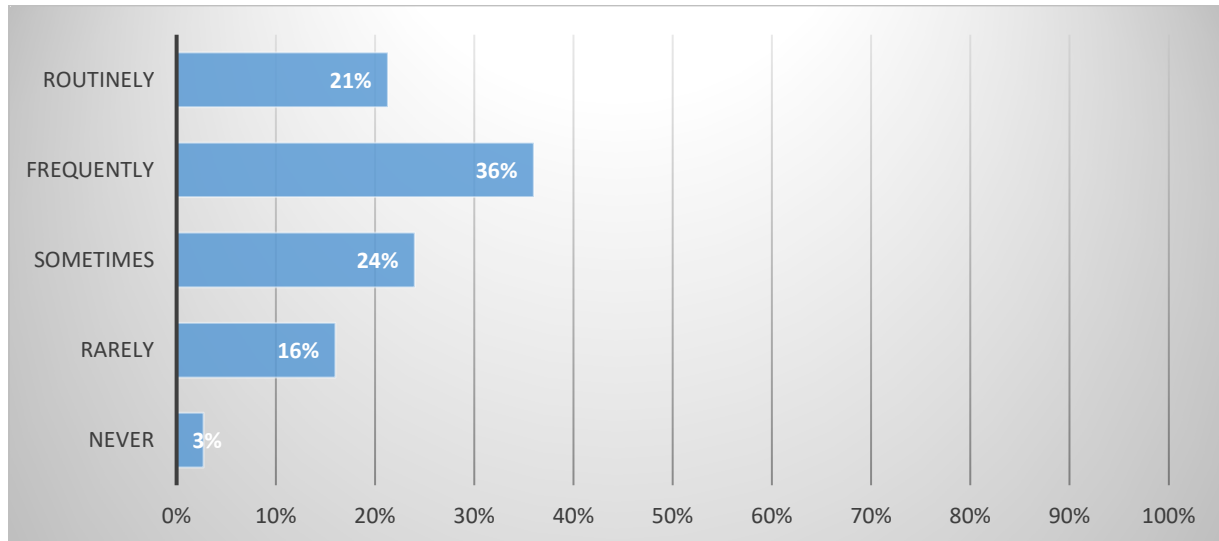


***Item 113b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***

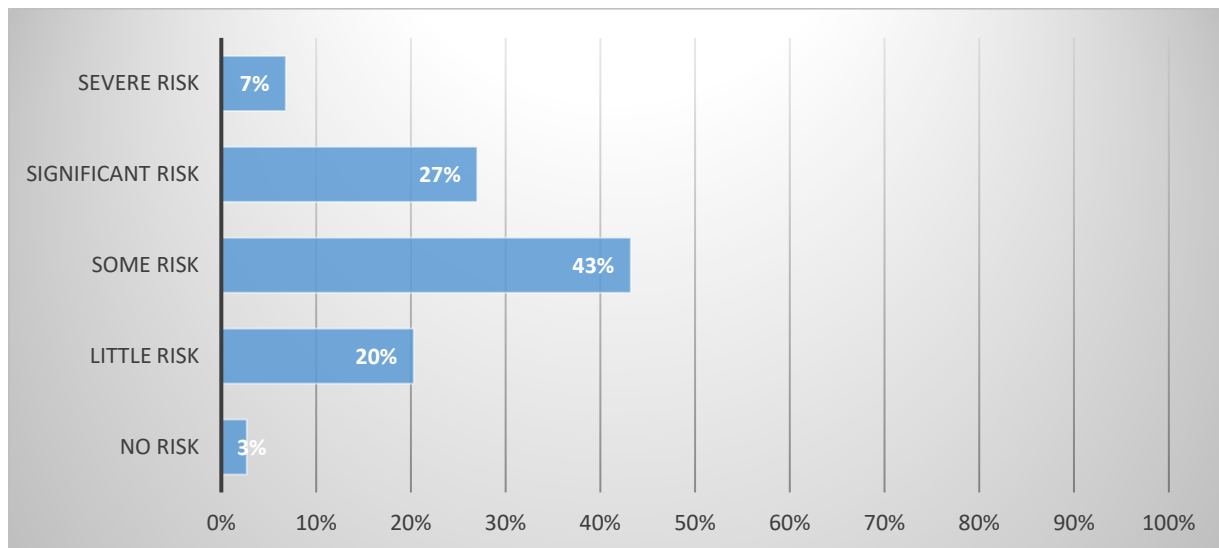




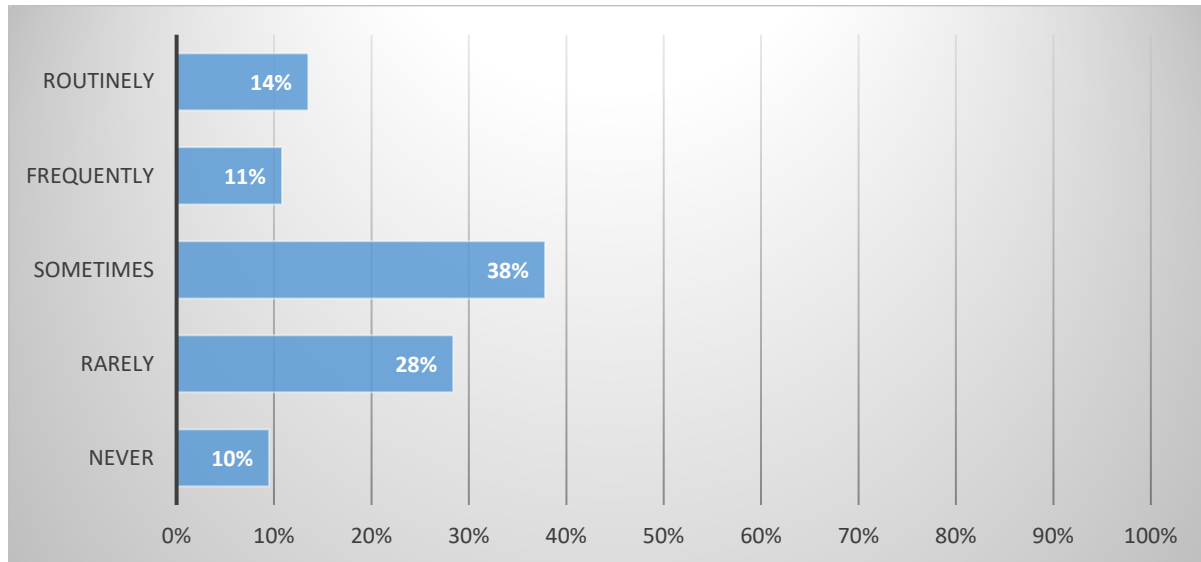
***Item 114a: How often do you utilize herbal therapy using American and European herbs (extracts, teas tablets, etc.)?***



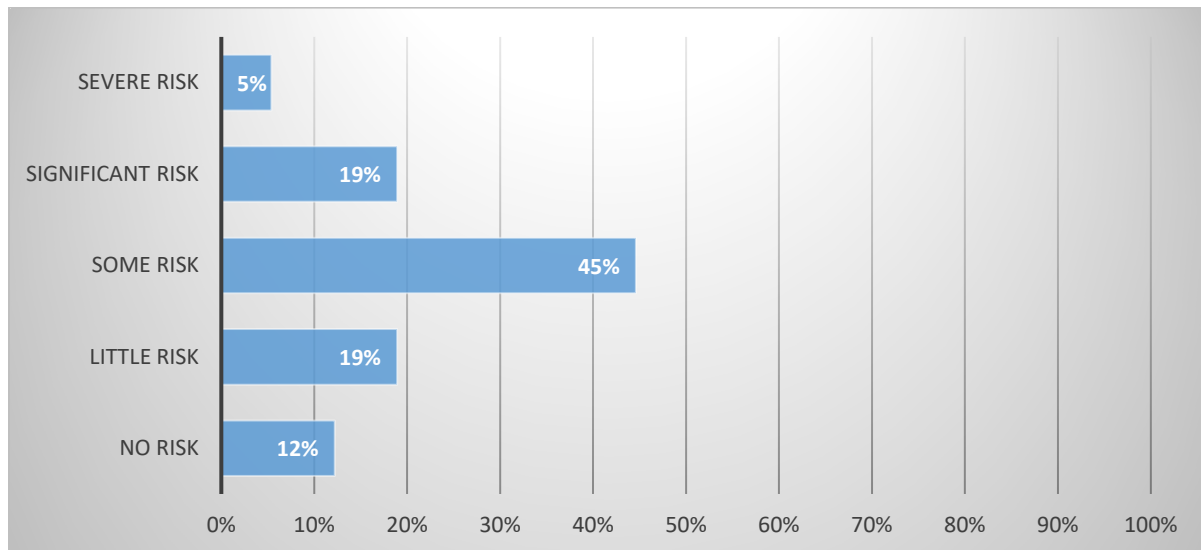
***Item 114b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



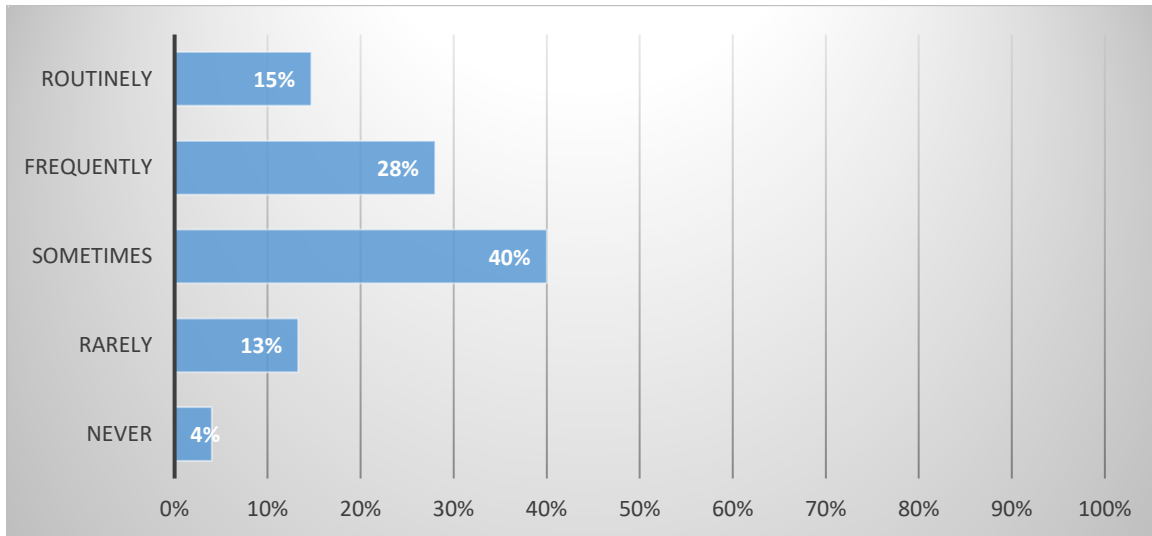
***Item 115a: How often do you utilize herbal therapies using traditional Chinese herbs?***



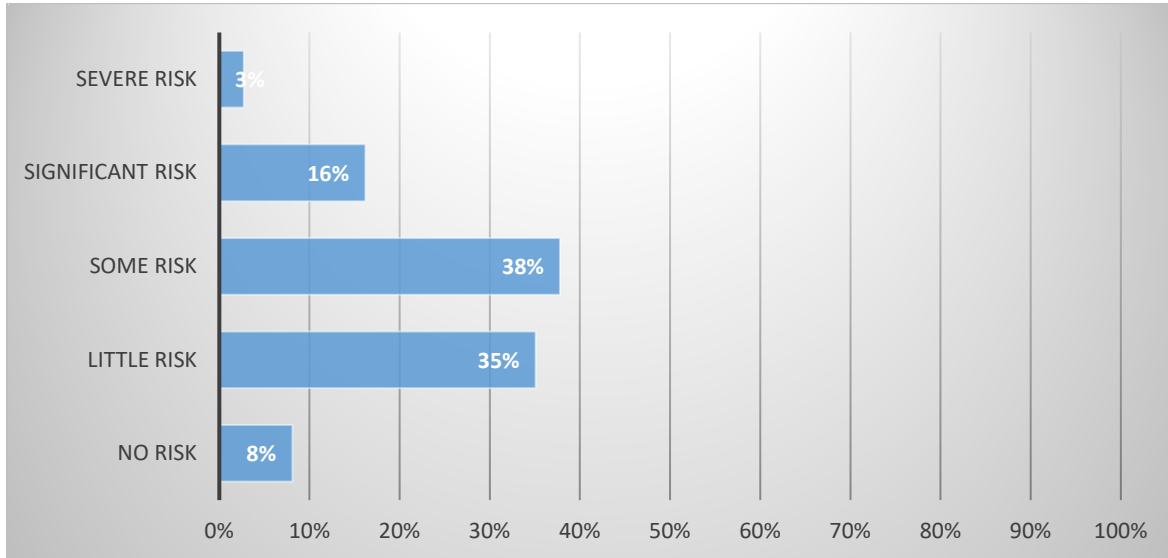
***Item 115b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



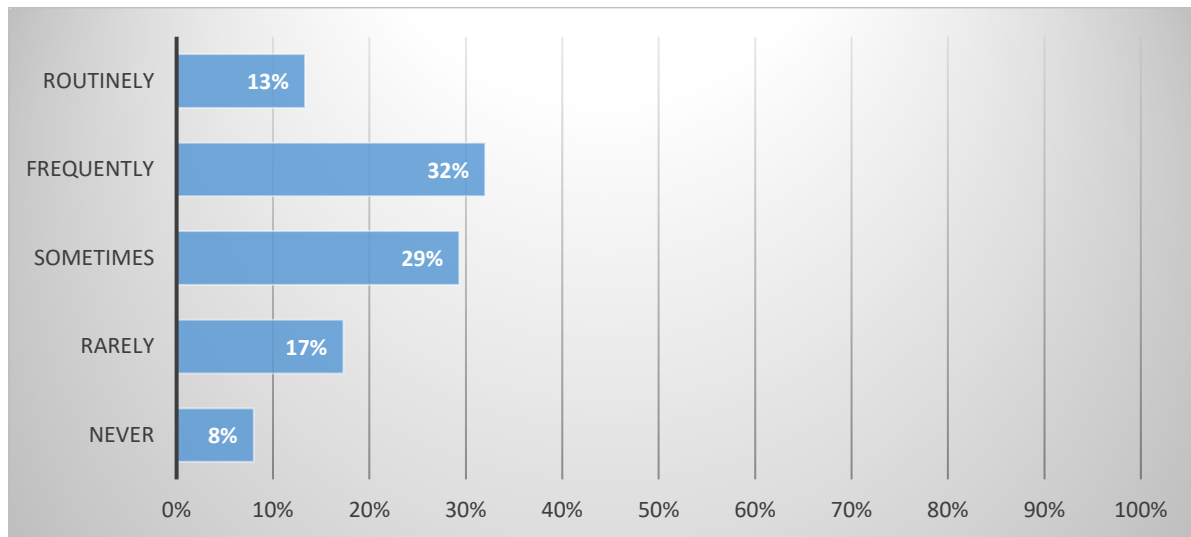
***Item 116a: How often do you use phytochemical supplementation (e. g. isoflavones, epicatechins)?***



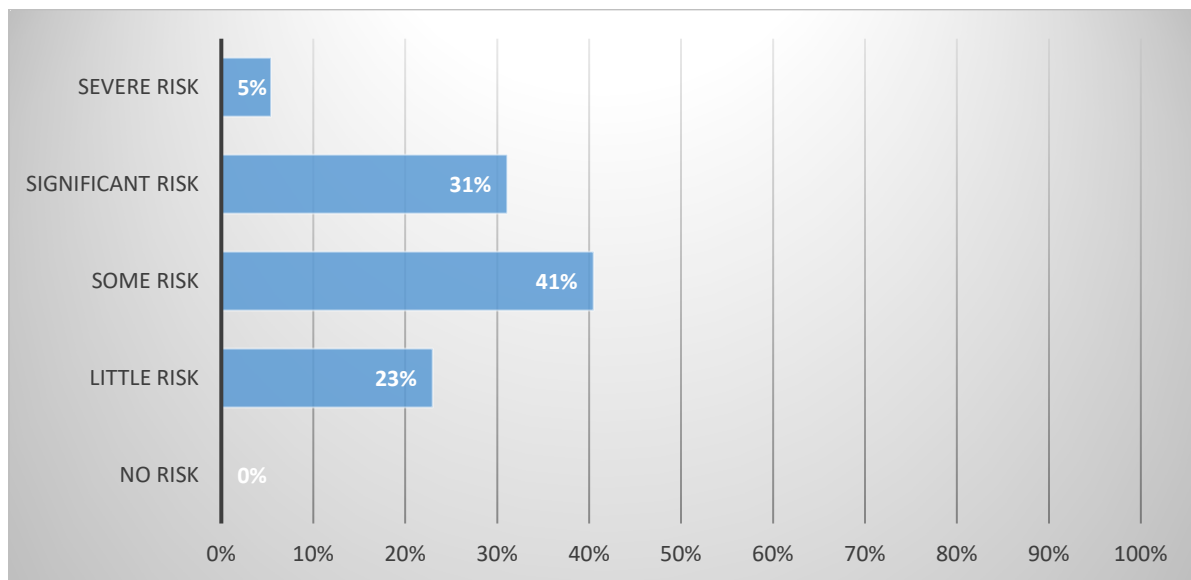
***Item 116b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



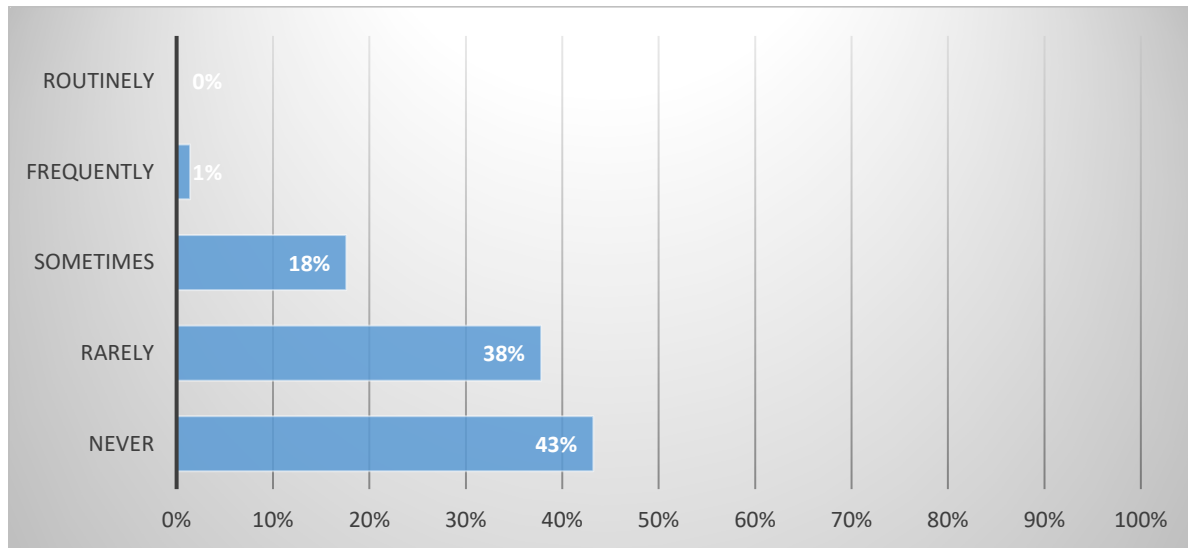
***Item 117a: How often do you utilize weight loss management programs?***



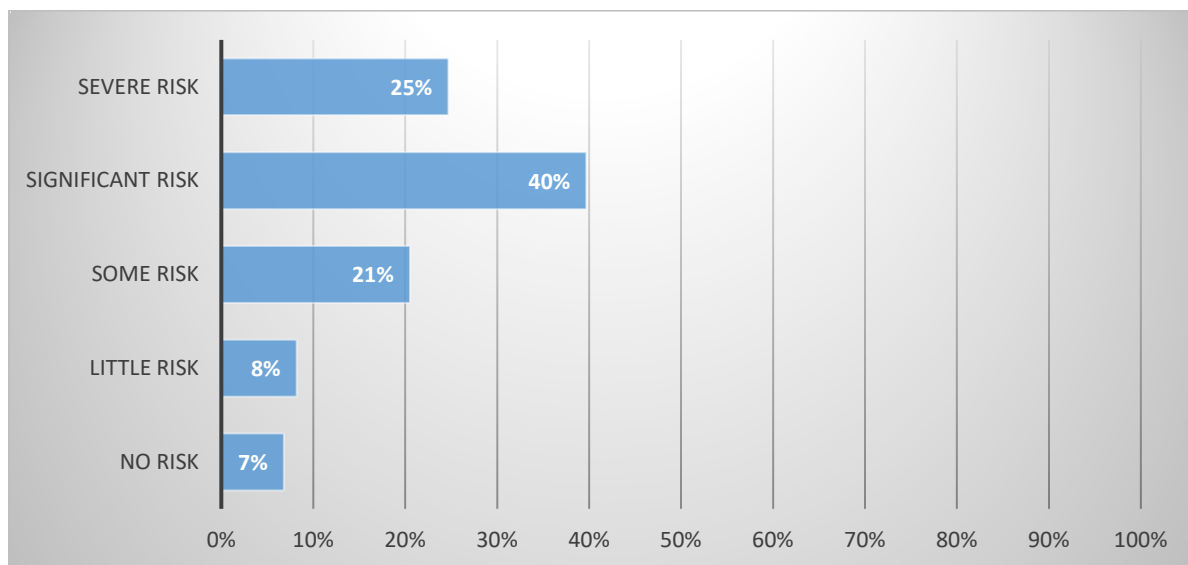
***Item 117b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



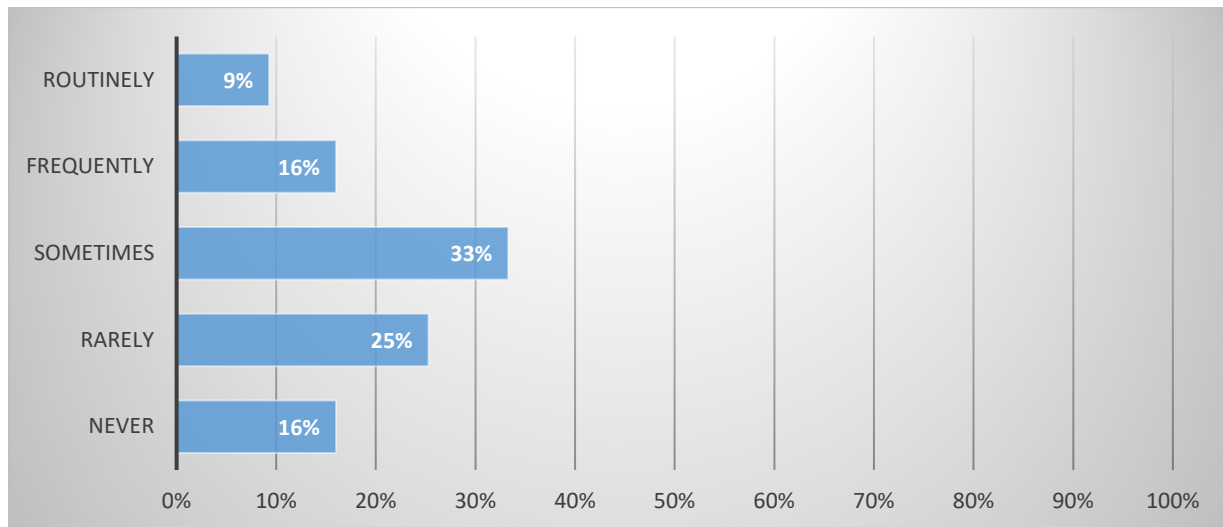
***Item 118a: How often do you utilize anorexia/bulimia management programs?***



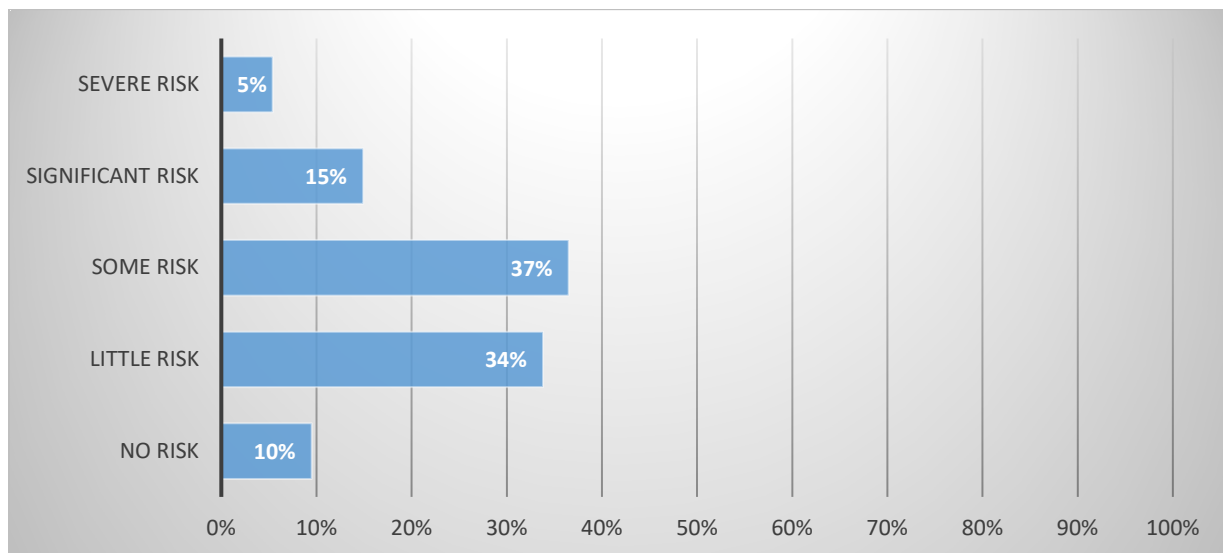
***Item 118b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



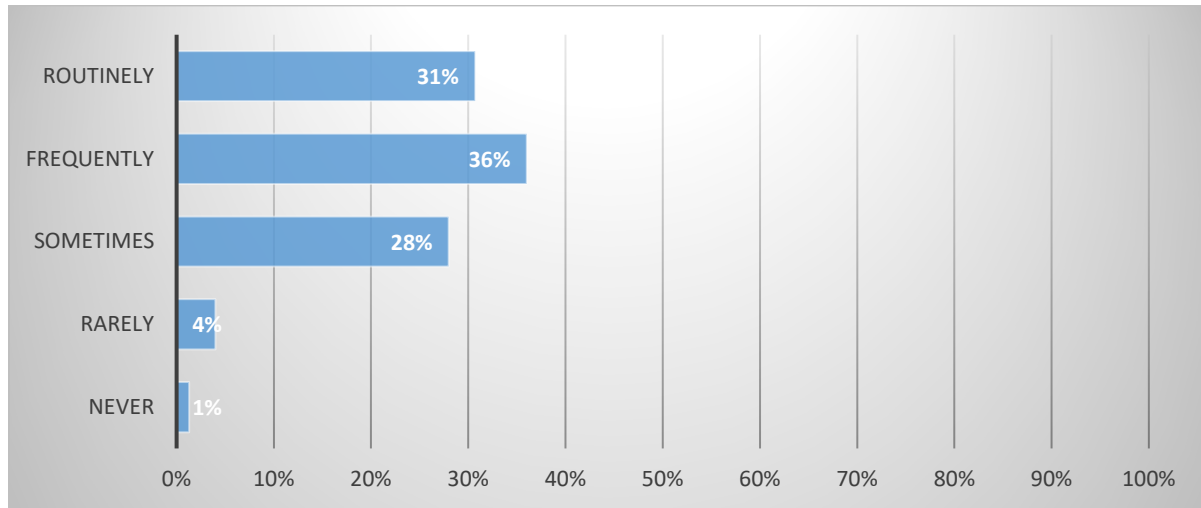
***Item 119a: How often do you recommend/provide nutrition—focused patient education classes?***



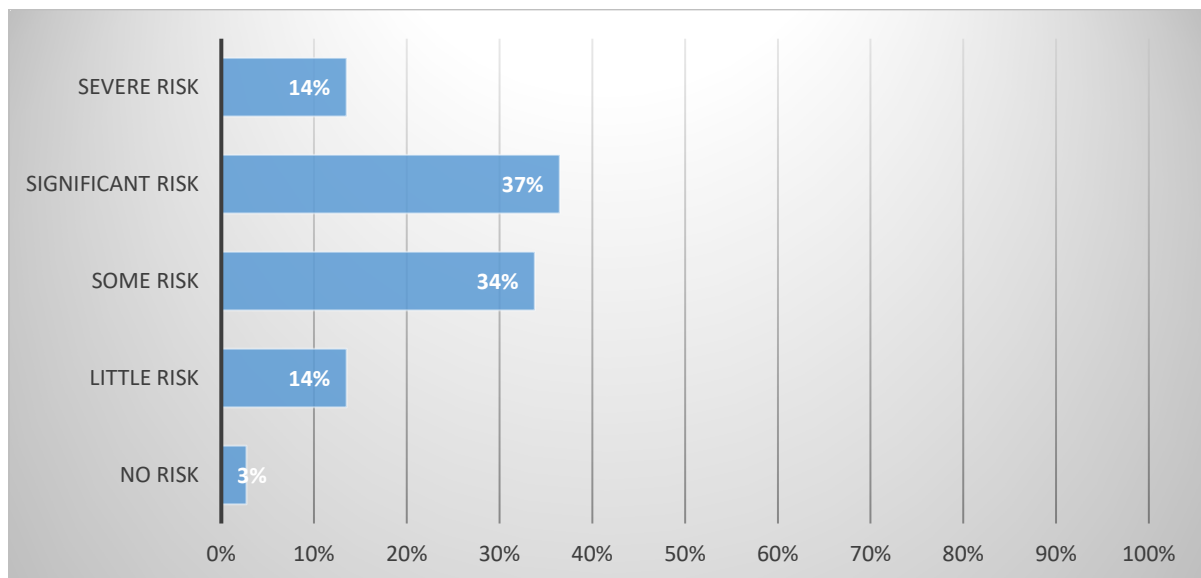
***Item 119b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



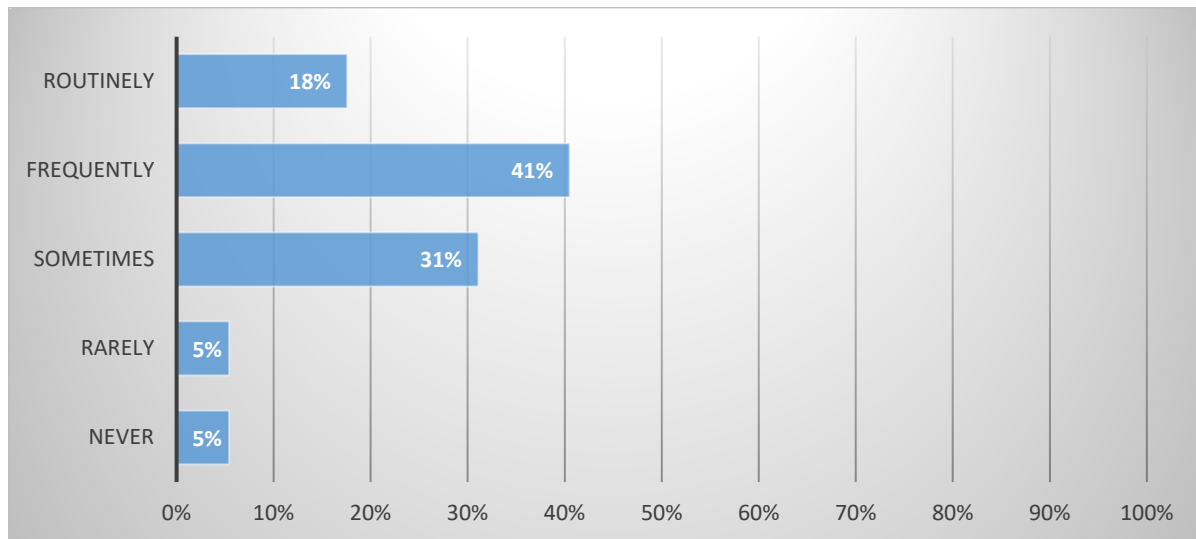
***Item 120a: How often do you recommend/help develop special diets (e.g., diabetes, kidney disease, allergy elimination, gluten, or lactose intolerance)?***



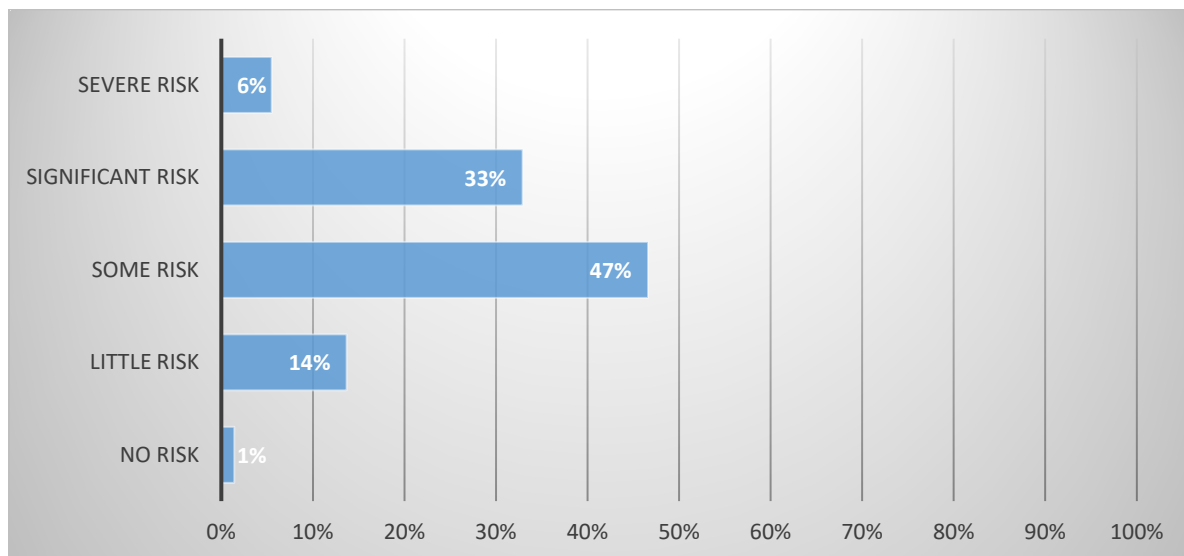
***Item 120b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***



***Item 121a: How often do you utilize nutritional detoxification protocols?***



***Item 121b: What is the risk to the patient's health or safety when a chiropractor poorly performs or misinterprets this assessment task?***





***Item 122a: How often do you recommend supplementation for classic nutritional deficiency diseases (e.g., scurvy, beri beri, iron, pernicious anemia, Rickets)?***

